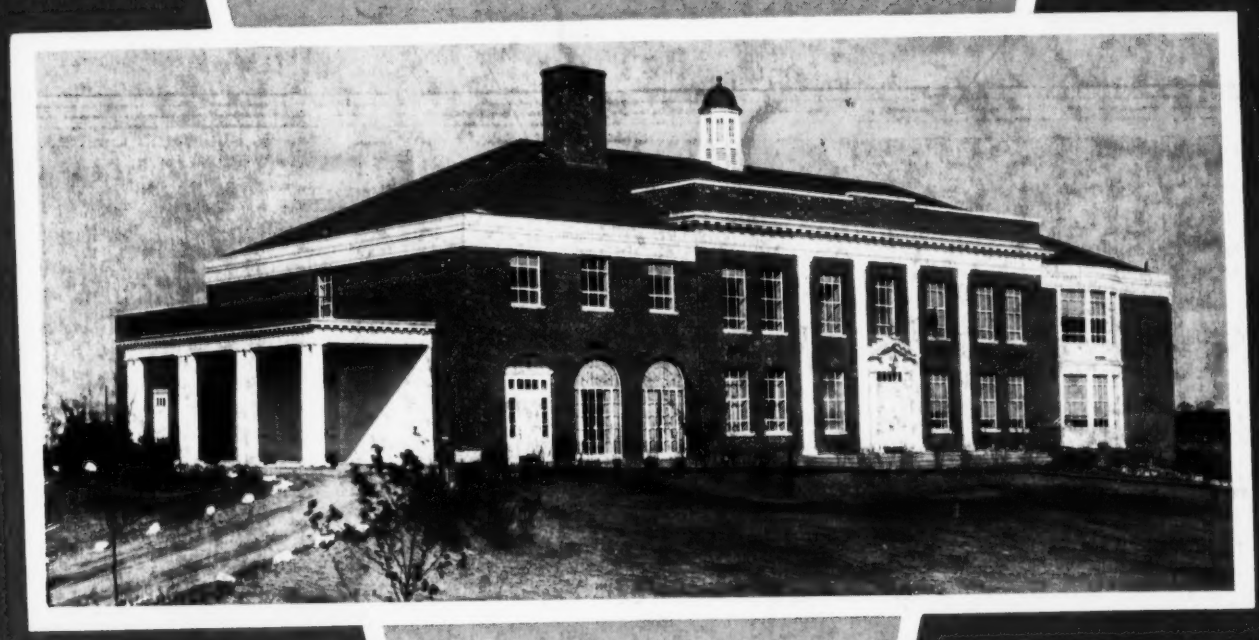


THE AMERICAN School Board Journal

A Periodical of School Administration

·MAY·1931·

THE BRUCE PUBLISHING COMPANY

NEW YORK MILWAUKEE CHICAGO

ECONOMY AND GOOD LOOKS ARE ESSENTIAL TO SCHOOL CLOSETS

Vogel Number Ten-A with Syphon Jet Bowl Tank is concealed in the wall. Number Ten has exposed tank.

BECAUSE Vogel Number Ten and Ten-A closets combine these two essentials, they are becoming increasingly popular for school and institutional installations. Children can never forget to flush Vogel closets and these closets flush fully on three to four gallons of water — think of what this means in water saving during a year.

And as to upkeep — A Vogel closet on an Endurance Test has flushed continuously night and day 290.000 times, and not even a washer has been renewed. This represents one hundred years of use, *and the Test continues indefinitely.*

A book prepared especially for school boards, architects and enginers will be sent promptly upon request.

VOGEL PATENTED *Products*

JOSEPH A. VOGEL COMPANY

Wilmington, Del. - St. Louis, Mo.

Von Duprin

Self-Releasing Fire and Panic Exit Latches

The Perfect Servant

Even though Von Duprin devices give you many years of trouble-free, expense-free operation - - - as they will - - - that is not the main purpose for which they have been fashioned with such painstaking care.

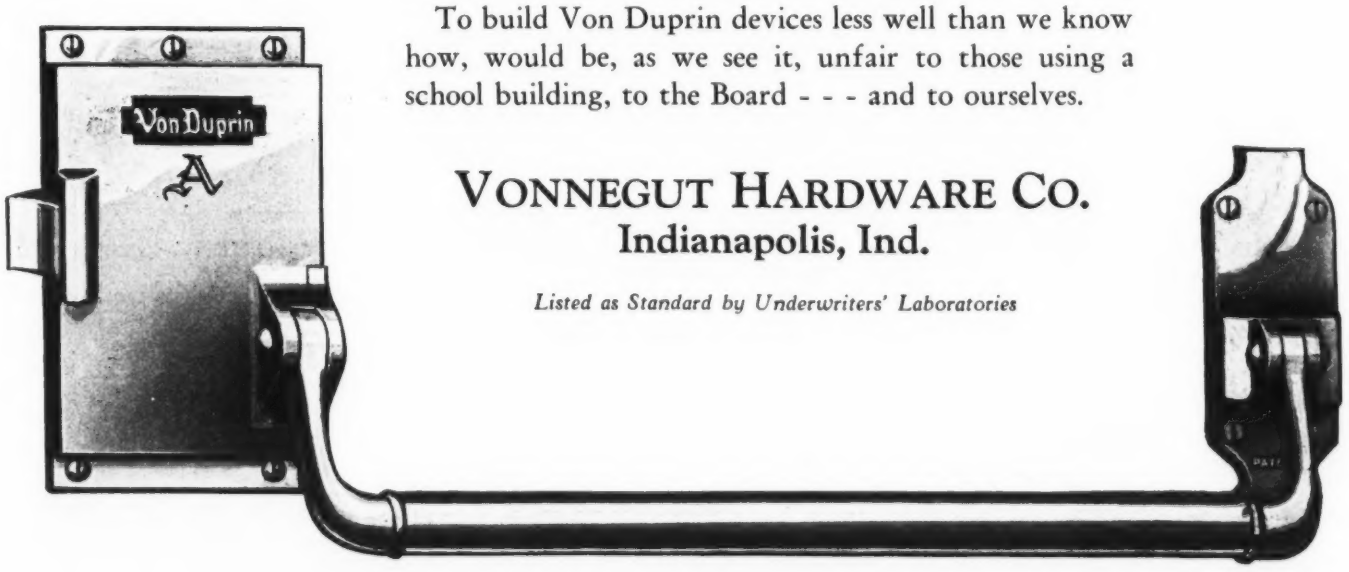
The main purpose of these devices is to wait - - - to be always ready for the emergency which is to put upon them the burden of saving lives, of making possible instant exit when it is vitally necessary.

Sweet's
Pages C3892-C3896

It is for the hour of need - - - which may never come, or which may come tomorrow - - - that we build into Von Duprins the best of all we have learned in twenty-three years of very hard work.

Devices built at less cost in time, in effort, in money, might do well enough for a reasonable amount of daily use - - - but would not, could not, be adequate to meet the terrific strain of emergency demands.

To build Von Duprin devices less well than we know how, would be, as we see it, unfair to those using a school building, to the Board - - - and to ourselves.



VONNEGUT HARDWARE CO.
Indianapolis, Ind.

Listed as Standard by Underwriters' Laboratories

A recent coast to coast survey of Iron Fireman owners shows average annual fuel savings of 31.62 per cent—equivalent to a yearly return of 39.44 per cent on the investment in Iron Fireman Automatic Coal Burners ... Iron Fireman is made in a range of sizes for schools, buildings, industrial plants, and for large and small homes.

Can your school afford to waste what IRON FIREMAN users are saving?

Cut operating costs, increase heating efficiency with Iron Fireman Automatic Coal Burner

IRON FIREMAN makes striking fuel economies and greatly increases heating plant efficiency. School board members from coast to coast regard Iron Fireman as one of the finest investments they ever made, because this automatic coal burner (1) cuts fuel costs, (2) provides steady heat or power, (3) reduces labor costs, (4) eliminates the smoke nuisance.

Iron Fireman burns the smaller sizes of coal, which cost less per ton. Regulated by automatic controls, Iron Fireman feeds coal to the fire *from below*, just as it is needed. Temperature is held steady, regardless of weather conditions. The janitor or fireman has more time for other duties as Iron Fireman requires but a minimum of attention. Iron Fireman creates an intensely hot fire in which the volatile coal gases are transformed into useful heat. Thus smoke—a nuisance and a waste of good fuel—is eliminated.

Let Iron Fireman help pay for itself

Install Iron Fireman in your school this summer. The savings it will make in one heating season should go a long way toward writing off the cost of the machine. Ask your dealer about the special Iron Fireman finance plan. Have him make a survey of your heating plant and estimate possible savings with Iron Fireman. Get in touch with him direct, or use the coupon. Iron Fireman Mfg. Co., Portland, Oregon. Branches or subsidiaries in Cleveland, Chicago, St. Louis, New York, Milwaukee. Dealers everywhere.

Junior and Senior High School, Detroit Lakes, Minn. "We formerly fired two boilers during the winter months. Now one boiler with Iron Fireman gives us adequate heat. We have remedied the smoke nuisance. Our janitors have more time for other duties. We have more even heat. and we will show a decided saving in fuel."

Public School, Englewood, Colo. "Iron Fireman has saved 36 per cent on the total cost of fuel and ash disposal over the previous heating season. This does not include labor saving over hand firing. Regularity and amount of heat have been satisfactory."

IRON FIREMAN
AUTOMATIC COAL BURNER
THE MACHINE THAT MADE COAL AN AUTOMATIC FUEL

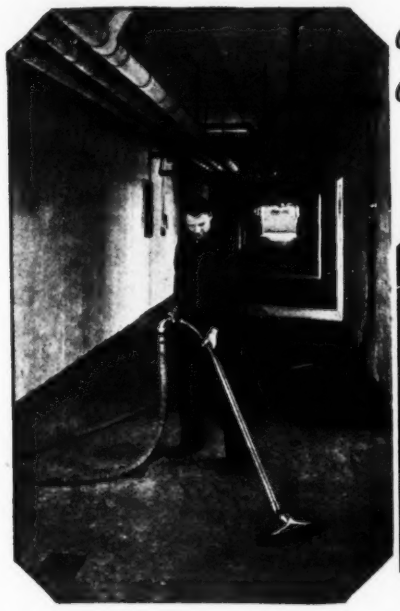
MAIL THE COUPON

Iron Fireman Mfg. Co., Portland, Ore. Dept. AS-3.
Please give me full information regarding Iron Fireman.

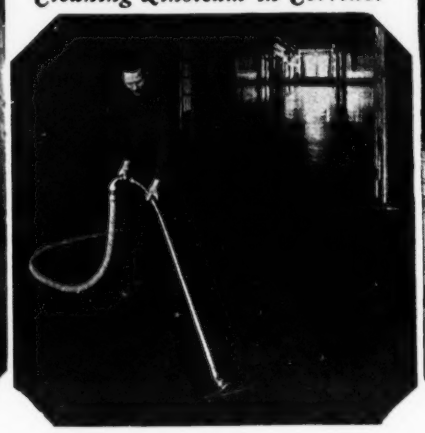
Name.....

Address.....

City.....

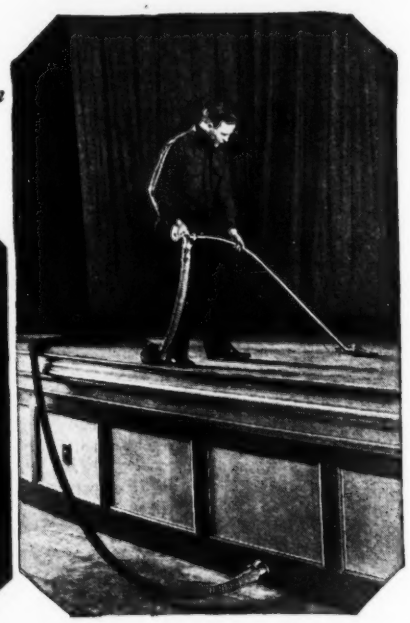


Cleaning Cement Corridor



Cleaning Linoleum in Corridor

Cleaning Stage in Auditorium



The cleaning system that saves three ways...

THE Spencer Central Cleaning System protects the health of every child and teacher in the school by removing to a container in the basement all dirt and dust—from the finest chalk dust to the heavy dirt in the corridors and mats.

It saves time — because it is an easy and convenient method. It saves equipment — floors — paint — books and decorations, by keeping the dirt constantly out of the building.

It saves in the boiler room — by cleaning the boiler tubes and floor — often the resulting economy pays the operating expenses of the system.

Leading educators and architects endorse it — and it is used daily in more than 1500 schools.

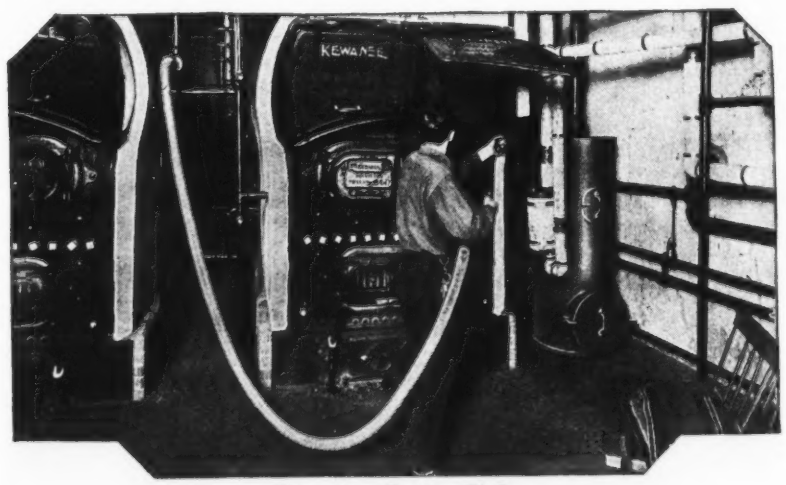
THE SPENCER TURBINE CO.

HARTFORD, CONNECTICUT — CENTRAL CLEANING SYSTEMS — REPRESENTATIVES IN 50 CITIES

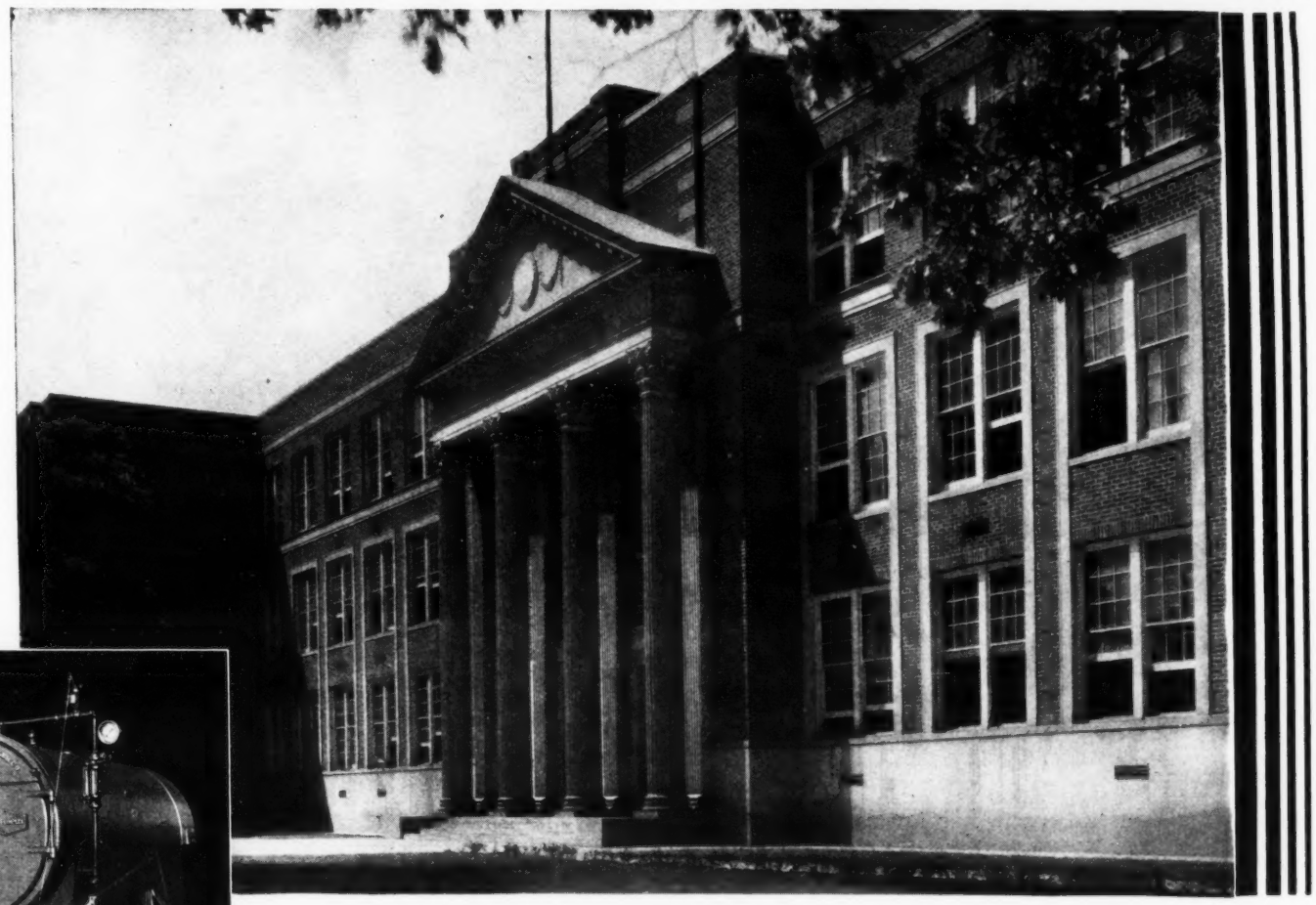
3326

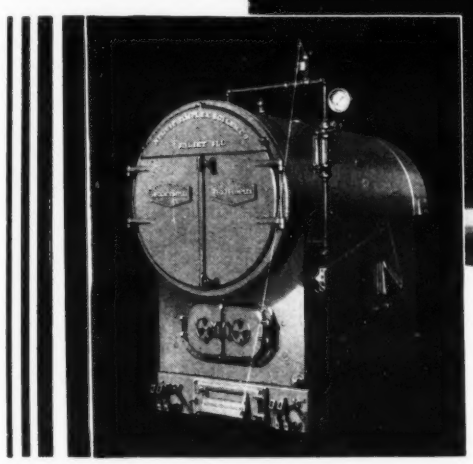
Send for Booklet

When you remodel—or consider plans for a new school—ask for the Spencer booklet "Modern Cleaning Methods for Modern Schools."



Cleaning Boiler Tubes





Technical High School, Memphis, Tenn.
Heated by Heggie-Simplex Smokeless Boilers.
Architects: Hanker & Cairns
Engineer: Thomas H. Allen
Heating Contractor: Hughes Heating Co.

Heggie-Simplex Boilers Heat This Modern Technical High School

THE selection of Heggie-Simplex Boilers for the Memphis Technical High School is significant evidence of their outstanding superiority. As this is a technical school, the men responsible for this choice kept foremost in mind the importance of selecting only the most modern and efficient heating equipment.

They chose Heggie-Simplex Boilers because they recognized that the advanced design of these heating units would assure a degree of economy and dependability which other types of heating equipment could not approach.

The extra large combustion chamber of Heggie-Simplex Boilers gives fuel more room in which to burn. The much larger heating surface in direct contact with the fire absorbs the heat faster. Rear-front-rear flues strip the gases of all usable heat units; while unrestricted water circulation carries the heat quickly to the outlets. These and other important features combined only in Heggie-Simplex Boilers are constantly establishing new low records of fuel economy.

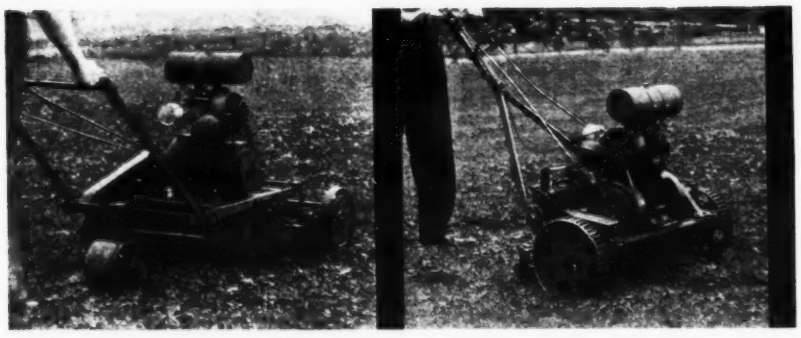
Built of steel, fused by electric welding into one seamless unit, Heggie-Simplex Boilers are crack-proof and leak-proof—a safety feature that not only eliminates costly repairs but effects a substantial reduction in insurance rates.

Heggie-Simplex Boiler Co., Joliet, Ill. Representatives in principal cities—telephone and address listed under "Heggie-Simplex Boilers."

HEGGIE-SIMPLEX

STEEL HEATING BOILERS

OLD RELIABILITY plus NEW POWER for FASTER, CLEANER MOWING



Roller Type—22, 30-inch cut. *Wheel Type—20, 25-inch cut.*

The new Ideal Power Mowers have unequalled flexibility and handling ease. The powerful new motor permits them to be instantly accelerated from almost a standstill to a fast walking pace. Automobile type differential makes turning easy. Lubrication and cooling systems are superior to any other. The extensive use of aluminum in the mower construction gives them new lightness at no sacrifice to strength. The speed at which these new Ideal Mowers can perform makes one or more of them a great economy on the majority of school grounds. One man can do the work of several with hand mowers. The new Ideal Power Mowers are built with the same carefulness that has obtained for them the priceless reputation of reliability through 15 years of service. Two sizes of wheel type mowers—20- and 25-inch width cut. Two sizes of roller type mowers—22- and 30-inch cut. Write today for complete details.

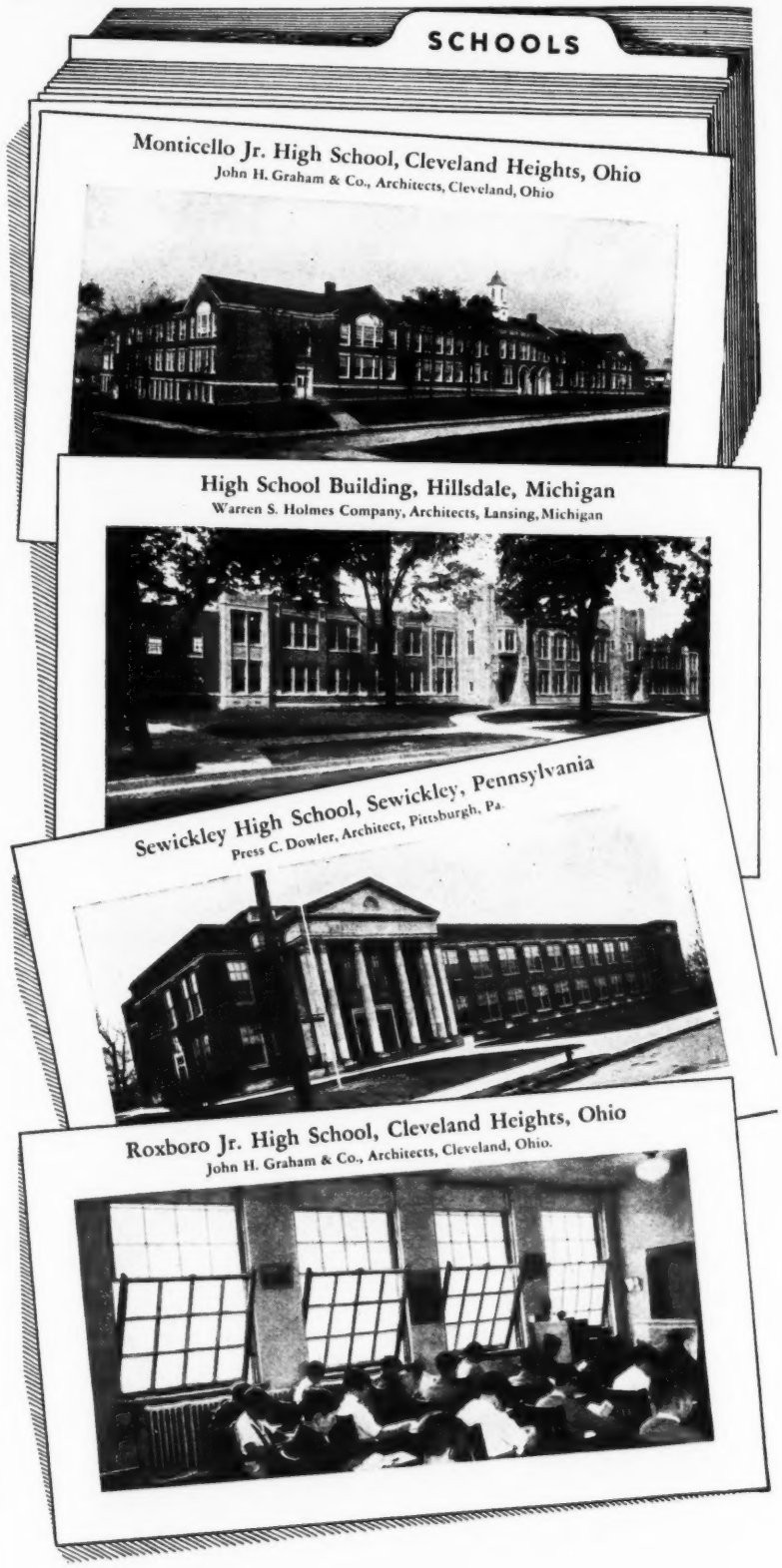
IDEAL POWER LAWN MOWER COMPANY
435 Kalamazoo St., Lansing, Mich.

FACTORY BRANCHES

413 W. Chicago Ave., Chicago, Ill. 161 Vester St., Ferndale (Detroit), Mich. 237 Lafayette St., New York City Brookline, Mass. 273 Boylton St.,

Dealers in all principal cities

IDEAL
GRASS CUTTING EQUIPMENT



DRAFTLESS VENTILATION

INSURE the good health of the pupils in your school this easy way: Williams Reversible Window Equipment—with both upper and lower sash completely reversible—deflects incoming air currents upward, affording the maximum of clean, draftless ventilation. Affords better shading facilities—saves eye strain.

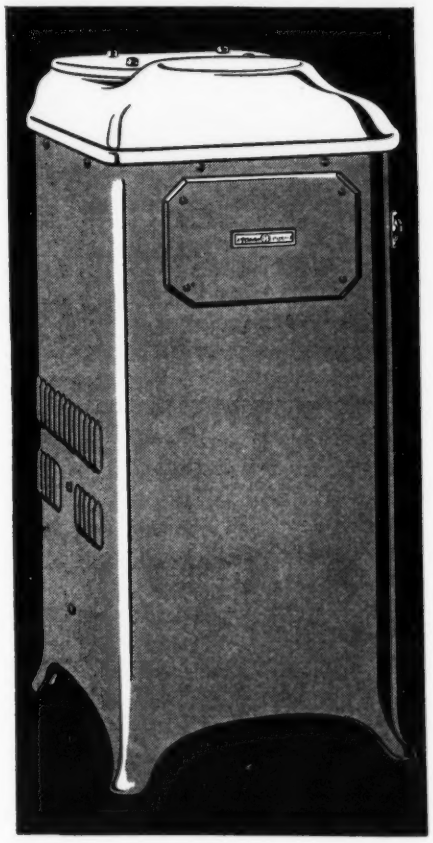
Cleaned from the inside, safely, the greater efficiency of Williams Pivot Sash Windows makes them pay for themselves in just a few years.

THE WILLIAMS PIVOT SASH COMPANY
East 37th St. at Perkins Ave., Cleveland, Ohio
For 27 years manufacturers and installers of Reversible Window Equipment.

WILLIAMS REVERSIBLE WINDOW EQUIPMENT
Clean Your Windows from the Inside

This 3 YEAR GUARANTEE

is based on proved results



•

OVERSHADOWING everything else on the subject of refrigeration is this one shining fact: *the average user of General Electric Refrigeration* simply does not know what service interruptions are! For over three years now General Electric Refrigeration equipment has been performing in a manner once thought impossible.

That is the sound basis of today's all-inclusive 3-Year Guarantee by General Electric. And it is also the basis of a constantly accelerating trend to General Electric Refrigeration in schools of every class.

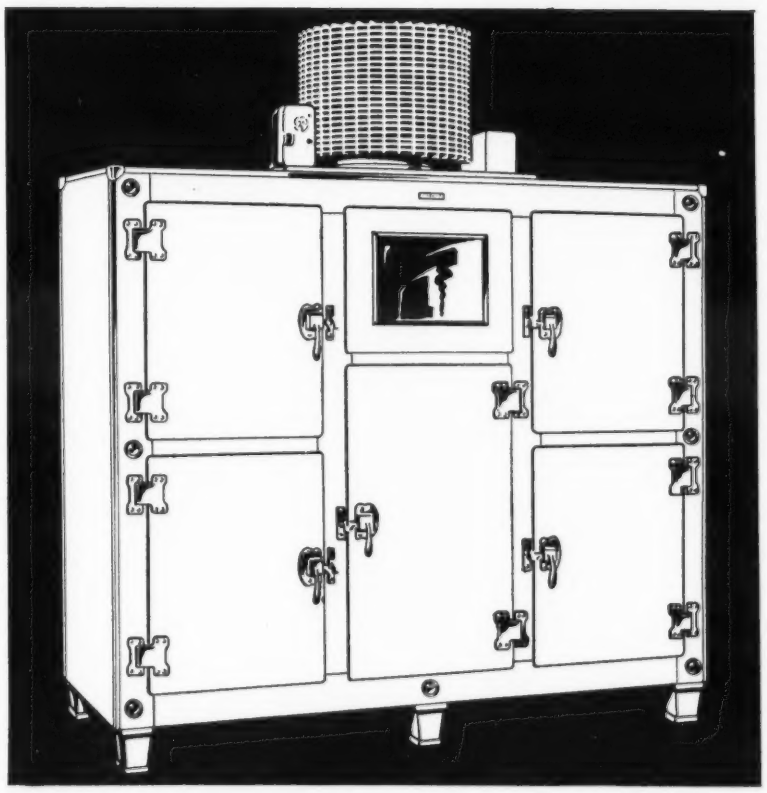
Give budget figures the 3-Year Guarantee's protection from unforeseen after-cost. Give staffs and students the protection of *sure* refrigeration, made possible by the famous Monitor Top mechanism—hermetically sealed, self-oiled, lastingly quiet, clean as electric light. Let General Electric efficiency set an example in domestic science classes and cafeterias.

Combining highest excellence with extreme economy, General Electric Refrigeration stands for wise, responsible administration wherever it is used.

General Electric Co., Electric Refrigeration Department, Section CK5, Hanna Bldg., 1400 Euclid Ave., Cleveland, Ohio.

Backed by 1,000,000 *Proofs*

In winning 1,000,000 users already, General Electric Refrigeration has exceeded all records for swift, broad acceptance—another measure of excellence.



INVEST IN AN ELECTRIC REFRIGERATOR

For every school purpose there is a completely suitable General Electric model. The reach-in Refrigerator cabinets and their units are always perfectly co-ordinated, always self-contained and readily portable. Both the Refrigerators and the Water Coolers are most compact, and they present a fine modern appearance.

•

JOIN US IN THE GENERAL ELECTRIC PROGRAM, BROADCAST EVERY SATURDAY EVENING ON A NATION-WIDE N. B. C. NETWORK.

GENERAL ELECTRIC

REFRIGERATORS

COMMERCIAL, DOMESTIC, AND APARTMENT HOUSE REFRIGERATORS · ELECTRIC WATER COOLERS AND MILK COOLERS

He Fights Plumbing Failure and High Costs

Faulty design, inferior construction or improper layout of plumbing in schools, hospitals, industrial plants, public buildings and similar places, can develop into serious menaces to health and efficiency.

For failure in such installation creates unsanitary conditions, pollution and disease germs.

But in addition, such failures represent a very tangible waste in dollars for repair and replacements, which often amount to terrifying figures.

It is the job of the Clow Soldier of Sanitation to make sure that each installation, on which he is called in, provides the very ultimate in sanitation surety—and also to make certain that the installation will function on a very minimum of dollars.

To back him in this important work, Clow goes to extreme lengths in the factory.

For example: every battery of urinals, closets, lavatories and similar fixtures is set up according to specifications before shipment—and tested under conditions bordering on actual service.

Such plumbing is not intended to fail, wear out rapidly or to be rejected after partial installation.

And builders, architects, owners and plumbers have the assurance of perfect sanitation, with the lowest possible cost, through the years.

On all jobs where sanitation may develop into an acute problem—the Clow Soldier of Sanitation will gladly give you the fruits of Clow's 52 years of experience. And this man has behind him the most complete line of specialized fixtures in the world. Call him in. This is Bill Abell, Aurora, Ill.—North Central Illinois Territory.

CLOW

CHICAGO

PREFERRED FOR EXACTING PLUMBING SINCE 1878

School Architects Directory

RALPH E. ABELL CO.
176 W. Adams Street
Chicago, Illinois
Architects and Engineers
Educational Buildings

COFFIN & COFFIN
ARCHITECTS
522 FIFTH AVENUE
NEW YORK CITY

ROBERT R. GRAHAM
REGISTERED ARCHITECT
States of New York—New Jersey—Pennsylvania.
Member—N. Y. Chapter American Institute of Archts.
Complete Architectural Service on School Bldgs
—Consultations—
25 Prospect St. Middletown, N. Y.

S. ARTHUR AXTENS, A.I.A.
ARCHITECT
School Building Specialist
509—17th Street DENVER, COLO.

FRANK IRVING COOPER CORPORATION
ARCHITECTS ENGINEERS
SPECIALIZING IN SCHOOLHOUSE PLANNING
47 Winter St., Boston, Massachusetts

FRANK B. GRAY
ARCHITECT
School Specialist
73 S. LA SALLE ST. AURORA, ILL.

J. WILLIAMS BEAL, SONS
ARCHITECTS
185 DEVONSHIRE STREET
BOSTON, MASSACHUSETTS

DeVOSS & DONALDSON
ARCHITECTS
22 years experience designing School Buildings. Prompt attention given to requests for Estimates and Preliminaries
Second Floor, First National Bank Building
PORTSMOUTH, OHIO

GUILBERT & BETELLE
Architects
Chamber of Commerce Building
Newark, New Jersey

F. E. BERGER R. L. KELLEY
ARCHITECTS
Specialists Educational Buildings
LINCOLN BUILDING, CHAMPAIGN, ILL.

FLOYD E. DOUGHERTY
ARCHITECT
35 North Dearborn St., Chicago, Ill.

HACKER & HACKER
ARCHITECTS
SCHOOL SPECIALISTS
Fort Lee Trust Building, Fort Lee, N. J.
at the Plaza — Hudson River Bridge to New York City.

BONSACK & PEARCE INC.
WILL MAKE SURVEY OF YOUR NEEDS
Complete Architectural & Engineering
Services by School Specialists
411 Olive Street St. Louis, Mo.

JAMES C. EWING
REGISTERED ARCHITECT
Modern School Buildings
RAPID CITY, SOUTH DAKOTA

HAMILTON, FELLOWS & NEDVED
ARCHITECTS AND ENGINEERS
814 Tower Court, Chicago
Members of the American Institute of Architects

HARRY E. BOYLE & CO.
Architects and School Specialists
EVANSVILLE, IND.
Twenty Years Practical Experience
Registered in Indiana, Illinois, Tennessee

RAYMOND A. FREEBURG
ARCHITECT
School Building Specialist
JAMESTOWN, N. Y.

HAYNES & MASON
SCHOOL ARCHITECTS
PARK BLDG. FITCHBURG, MASS. CAPITOL BLDG. HARTFORD, CONN.

BOYUM, SCHUBERT & SORENSEN
ARCHITECTS & ENGINEERS
WINONA, MINN.

MARTIN J. GEISE, Architect
I make a Specialty of Designing School Buildings in Illinois, Iowa, and Missouri. Over 20 Years Experience.
QUINCY, ILL. 8th and Main Sts.
AND
KEOKUK, IOWA
State Central Saving Bank Building, 6th and Main

THOMAS K. HENDRYX, A.I.A.
ARCHITECT
Bradford, Penna.
Registered in Pennsylvania and New York

CLARENCE WILSON BRAZER
REGISTERED ARCHITECT
Advisor to National Advisory Council on School Building Problems
310 Crozer Bldg. Chester, Penn.
232 Madison Ave. New York City

Bertram E. Geisecke A. Watkins Harris
GEISECKE & HARRIS
ARCHITECTS
SPECIALIZING IN SCHOOL DESIGN
207 W. 7th St. AUSTIN, TEXAS
513 Second National Bank Bldg. HOUSTON, TEXAS

Wm. G. Herbst, A. I. A. E. O. Kuenzli, A. I. A.
HERBST and KUENZLI
ARCHITECTS
Educational and Public Buildings
1249 North Franklin Place Milwaukee, Wis.

CARL W. CLARK A. I. A.
Savings Bank Building Cortland, N. Y.
Architect
Consultant and Plan Advisor-Mr. Frank H. Wood, former Director, Division of School Buildings and Grounds, New York State Department of Education.
New York Office-Suite 1432-33 W. 42nd St.

WM. H. GOMPERT, A.I.A.
Former Architect and Superintendent School Buildings, New York City
Consultant and Professional Advisor
To School Boards, Superintendents and Concerns Manufacturing Materials and Equipment for School Buildings
101 Park Ave., N. Y. C.

WARREN S. HOLMES COMPANY
Architects and Engineers
Specializing in School and College Buildings
CHICAGO LANSING, MICHIGAN BOSTON

School Architects Directory

W. MARSHALL HUGHES
REGISTERED ARCHITECT
Specializing in the design and planning of school buildings
147 N. Fifth St. Reading, Pa.

W. H. McLEAN
ARCHITECT
713 TREMONT TEMPLE, 88 TREMONT ST., BOSTON, MASS.
Specialist in Designing and Planning of School Buildings

ERNEST SIBLEY & GEORGE M. CADY
ARCHITECTS
Palisade, N. J. Litchfield, Conn.
HENRY R. HOWLAND
CONSULTING ENGINEER
101 Park Ave., New York, City

ROBERT M. HYDE
ARCHITECT
8 South Dearborn St. Chicago, Ill.

PERKINS, CHATTEN & HAMMOND
SCHOOL ARCHITECTS
MURRAY A. DALMAN, EDUCATIONAL CONSULTANT
160 North LaSalle Street Chicago, Illinois

STARRETT AND VAN VLECK
ARCHITECTS
Equitable Life Building
393 Seventh Avenue, New York, N. Y.

WM. B. ITTNER, Inc.
Fellow, American Institute of Architects
Superior Architectural and Engineering Service Rendered
20th Floor, Continental Life Building
3615 Olive St., St. Louis, Mo.

C. Godfrey Poggi
and
William B. Bragdon
ARCHITECTS
Elizabeth, New Jersey

TOOKER & MARSH
ARCHITECTS
101 Park Ave. New York City, N. Y.

LEE & HEWITT
MEMBERS, AM. SOC. C. E., MEMBERS, A. I. A.
152 Market St. PATERSON, N. J.
53 Park Place NEW YORK, N. Y.
Specialists in School Design, Construction and Equipment

IRVING K. POND, C.E., F. and Past Pres. A.I.A. — EDGAR MARTIN, A.I.A. M. Am Soc. C.E.
ALLEN B. POND, F.A.I.A. — ALBERT L. LLOYD A.I.A.
POND & POND, MARTIN and LLOYD
ARCHITECTS
180 North Michigan Avenue, CHICAGO, Ill.

CHARLES L. TROUTMAN
Registered Architect and Engineer
School Specialist
410 American Trust Building Evansville, Ind.

Joseph C. Llewellyn F.A.I.A. — Ralph C. Llewellyn M.W.S.E. and A.I.A.
JOS. C. LLEWELLYN CO.
ARCHITECTS and ENGINEERS
38 S. Dearborn St.
Chicago

H. D. Rawson A.I.A.
H. Clark Souers A.I.A.
Oren Thomas A.I.A.
PROUDFOOT, RAWSON, SOUERS & THOMAS
School Architects
Hubbell Building Des Moines, Iowa

HENRY H. TURNER, A. I. A.
SCHOOL ARCHITECTS
Established 1909
Michigan Trust Building
GRAND RAPIDS, MICHIGAN

Edgar E. Lundeen, A.I.A. — Philip R. Hooton, A.I.A.
Archie N. Schaeffer, A.I.A. — Edwin Roozen
Registered Architects
Lundeen, Hooton, Roozen & Schaeffer
ARCHITECTS
7th Floor Peoples Bank Building
BLOOMINGTON, ILLINOIS

RASMUSSEN & WAYLAND
ARCHITECTS
36 WEST 47th STREET
NEW YORK CITY

H. J. VAN RYN, A.I.A. — G. J. DE GELLEKE, F.A.I.A.
VAN RYN & DE GELLEKE
ARCHITECTS
Fourteen Years-Architect School Board, Milwaukee, Wis.
152 WISCONSIN AVE. MILWAUKEE, WIS.

MALCOMSON and HIGGINBOTHAM and TROUT
A. W. Balle, Associate
ARCHITECTS and ENGINEERS
6th Floor, Malcomson Bldg. Detroit, Michigan

E. E. ROBERTS and ELMER C. ROBERTS
ARCHITECTS
82 W. Washington St. CHICAGO
E. E. Roberts, I.S.A.
Elmer C. Roberts, A. I. A.
Richard J Carlson

S. HUDSON VAUGHN
ARCHITECT
Guarantee Trust Building
Atlantic City, N.J.

J. MANDOR MATSON
ARCHITECT
ROOMS 528-538 BAKER BLOCK
RACINE, WISCONSIN

A. W. E. SCHOENBERG
ARCHITECT
OLEAN, N. Y.

WELLS AND HUDSON
ARCHITECTS & ENGINEERS
Hanover - New Hampshire

McGUIRE & SHOOK
ARCHITECTS
Specialists in Design of Educational Buildings
Consulting Service to School Officials
941 N. Meridian St.
INDIANAPOLIS, INDIANA

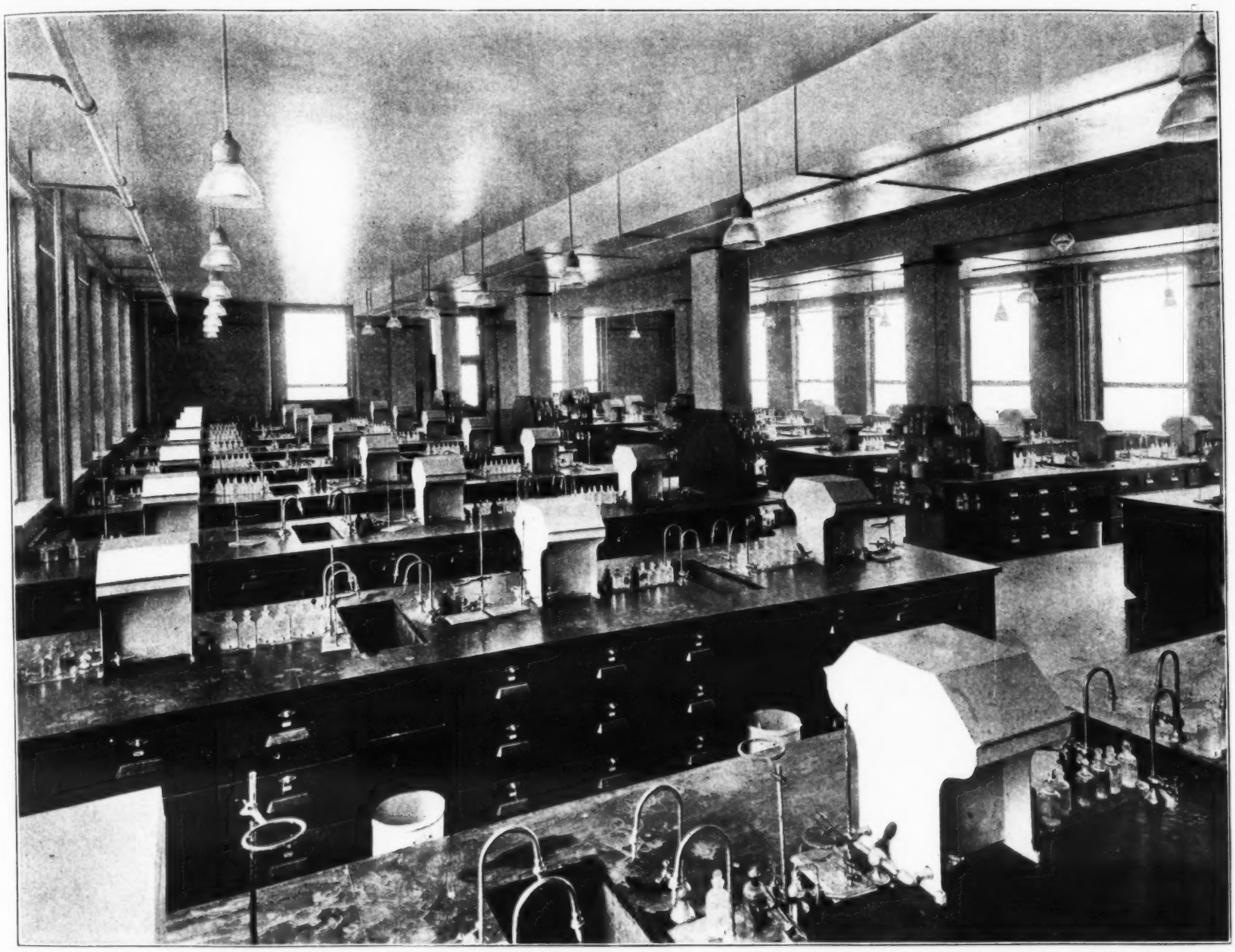
JOHN A. SCRIBBINS
ARCHITECT
GLENCOE, ILLINOIS
Specializing in Educational Buildings
331 Park Avenue Phone Glencoe 224

Carleton C. Wood A. I. A.
EDWARD J. WOOD & SON
Architects
Specialists in School Design
We also furnish Consulting Service to School Boards
Lowndes Building Clarksburg, W. Va.

UNIVERSITY OF ILLINOIS, Urbana, Illinois.

New Chemical Laboratory

Science and the New Science of Seeing



One of eight chemical laboratories in new building.

Pressed Lensrib Wire Diffusing Glass in all exterior windows.

Prof. J. M. White, Architect and Engineer.

The Chemical Engineer rewards the laboratory and classroom which trained his early genius, with the fabrication of a new glass of marked refinement and optical power, through which daylight illumination of high intensity, ***without glare***, and daylight colors unimpaired, are diffused with singular uniformity; plus vision comparable to out-of-door perception.

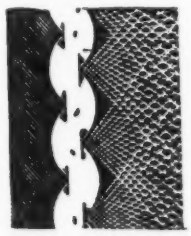
These high levels of daylight illumination stimulate energy for useful work, and longer duration of illumination periods greatly expand every process operation.

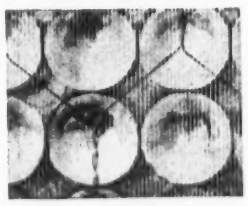
The human machine functions as it is stimulated, and light is the leading factor in classroom, laboratory, and factory.

The enormous advantage of adequate daylight illumination, enabling the eye to detect smaller objects or measurements where vision might otherwise lag, the increased facility for matching colors or specimens, crystals, fabrics, or samples, follows the use of Pressed Lensrib Diffusing Glass.

Daylight intensity increased 50 to 100 per cent as measured in foot candles without glare, and no window shades required under average conditions.

These superb new laboratories at the University of Illinois, eight in number, in the new Chemical Laboratory Building, with every facility known to modern science for undergraduate and postgraduate work, as well as advanced research achievement, have all exterior windows glazed with Pressed Lensrib Wire Diffusing Glass, which radiates a maximum intensity of at least 80 to 100-foot candles.





School Buildings particularly need PRESSED LENSRIB GLASS

This Diffusing Glass is indispensable for use in high-school science laboratories, medical centers and clinics, operating rooms, etc., either in side wall glazing, skylights, or ceilings.

All classrooms may be equipped with this glass in the exterior upper sash and eliminate all underlighted desks farthest removed from the windows.

UNIVERSITY OF ILLINOIS

Pressed Lensrib Diffusing Glass used in the following buildings:

New Chemical Laboratory—all exterior windows on four floors.

Material Testing Laboratory—10,000 square feet in exterior upper sash.

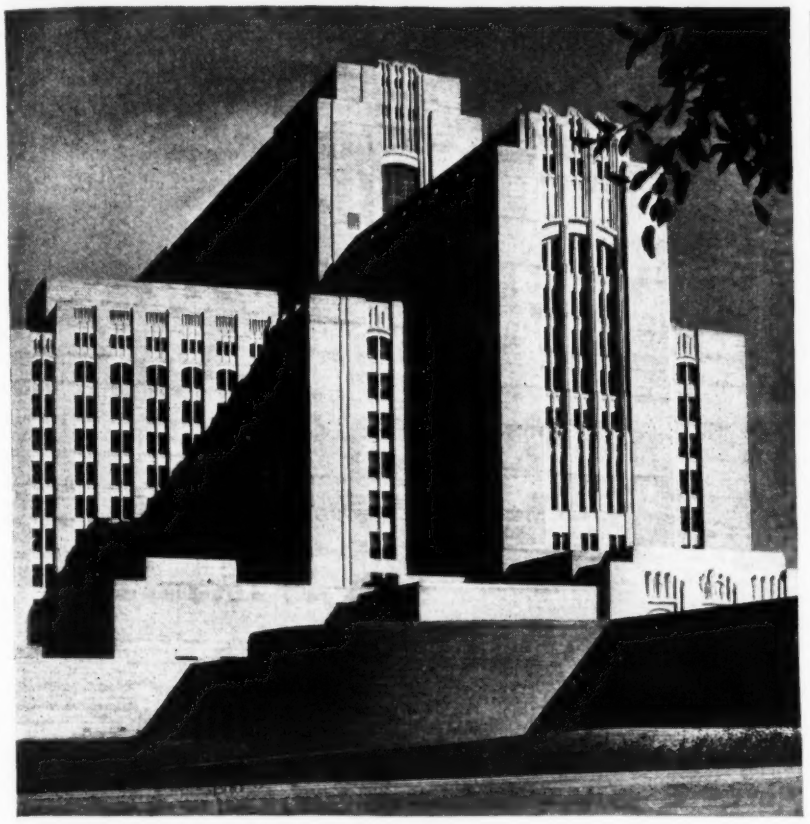
Illinois Medical Center (Chicago, Illinois)—Pressed Lensrib Diffusing Glass in Laboratories, Operating Rooms, and Clinic.

Women's Gymnasium, Urbana, Illinois.

Skating Rink—under construction. Pressed Lensrib Wire Glass exterior side walls.

Use Pressed Lensrib Wire Glass wherever a skylight is needed.

SPECIFICATION: *Sheet Pressed Lensrib Glass ¼ inch thickness as manufactured by the* ***MANUFACTURERS GLASS COMPANY, 1702 First National Bank Building, Chicago, Illinois,*** *to be glazed in the upper exterior sash on the east, south and west elevations, ceiling sash under skylights, toilet room doors and windows, classroom doors, all transom sash over interior and exterior doors, skylights, partition openings, and other openings as shown by plans and specifications, rabbets to be same as for plate glass.*



Los Angeles County General Hospital. By The Allied Architects Association of Los Angeles. Edwin Bergstrom, Myron Hunt, Pierpont Davis, Sumner P. Hunt, William Richards.

6,000

Hartshorn Window Shades

Los Angeles County General Hospital Installs 6,000 Hartshorn Shades Mounted on Hartshorn Rollers.

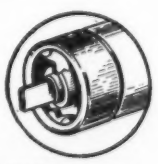
●

Largest institution of its kind in the world is the new Los Angeles County General Hospital, equipped throughout with the finest modern furnishings. Its 6000 windows are shaded with Hartshorn Tinted Cambric, mounted on Hartshorn Rollers.

Hartshorn Tinted Cambric is a beautiful, high-quality shade cloth — sunproof and cleanable. It is restful to the eyes — long-wearing, truly economical because of the extra service it gives . . . Mounted on Hartshorn Rollers, these shades instantly obey the hand at the shade cord — rolling silently, easily, unfailingly . . . Write for samples and prices.

STEWART HARTSHORN COMPANY
250 Fifth Avenue, New York City

Hartshorn
Est. 1860



SHADE ROLLERS *and* WINDOW SHADE CLOTH

CENTRALIZED RADIO

—the

MULTI-PHONE

Gives Your Students the Opportunity of Hearing Renowned Leaders

AS AN advocate of advanced methods in education you should do everything possible to aid the educational advantages of your school.

History, Music, Geography, Civics, Economics, and the Sciences are discussed over the air—and with the "Multi-Phone System" you can give students the added interest which is always repaid by better results.

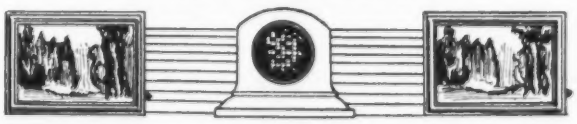
The "Multi-Phone System" includes installations up to a hundred or more rooms. A microphone is installed in the principal's office for announcements and daily assignments. Instructions for each day can be transmitted simultaneously to every room in the school.

The new magnetic flush-wall speaker, with a facing of tapestry, is our contribution to the beautification of schools.

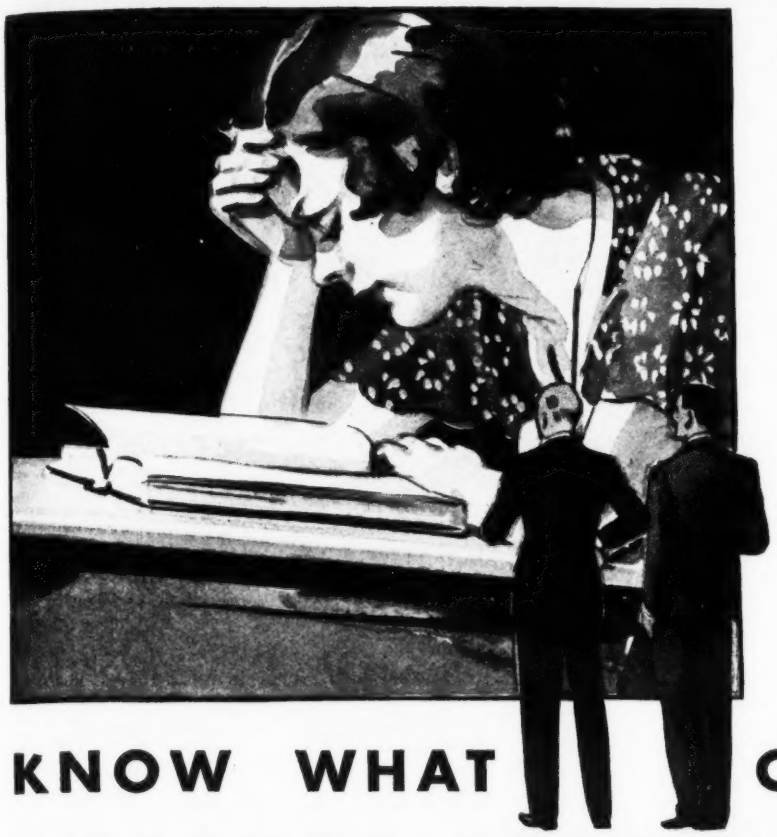
In planning your new school or addition make reservations for a Multi-Selecto centralized radio system.
Write us for plans and specifications.

"Installations include radio, phonograph and microphone"

MULTI-SELECTO PHONOGRAPH CO., INC.
Educational Department
GRAND RAPIDS, MICHIGAN



MODERNIZED EDUCATION



SUPERINTENDENTS AND PRINCIPALS

. . . don't let *slump* and *squint* ruin your students!

KNOW WHAT CONSTITUTES CORRECT-POSTURE SEATING BEFORE YOU BUY!

THE "American" All-Purpose Universal Desk . . . *one* type of desk that serves the modern classroom in *six* important ways. The new-day product of the research laboratories of the American Seating Company. Scientifically designed . . . sensible, durable . . . all that high quality steel and wood in the hands of craftsmen can contribute to school desk value.

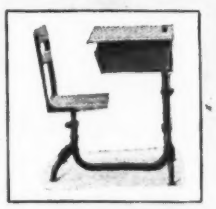
The illustration at the right concisely sets forth its posture-correctness, and its sight conservation features. In a minute you can see how this outstanding desk serves to assist materially the proper physical development of your students.

When you consider seating—be sure you have all the facts of the "American" All-Purpose Universal Desk. Be sure that your analysis and understanding of posture-correctness goes beyond a mere acceptance of the phrase. For we, who have given to this one subject exhaustive and exacting research, know that correct posture seating demands a definite scientific knowledge. That the subject should not be trifled with. That to know what constitutes correct-posture under all conditions is essential to your choice of posture-correct school seats.

The coupon brings you important and authentic information. Please use it!

1 *Book Support*—A special book support extension—quickly converting the standard model to an eye conservation desk.

4 *Comfort for Cripples*—Various attachments purchased separately as required, to fit the physical fault of the pupil.



2 *Level Top*—A simple device attached below the lid holds it at a level. Especially desirable for group study or socialized recitation.

5 *Study Hall Top*—In place of the standard top, a top without book receptacle can be substituted. Ideal for high school and study hall purposes.

3 *Typewriter desk*—A tilting top for use in the typewriting department. Turn the top down—and it's set for study or work.

6 *Standard Type*—For all 'round school use. As indicated in illustrations, various adjustments, attachments and devices quickly adapt it to any use.

American Seating Company

Makers of Fine Seating for Schools, Churches and Public Auditoriums
General Offices: 14 East Jackson Boulevard, Chicago, Ill.
Branches in All Principal Cities

FREE Poster on posture furnished for each classroom. Just send the coupon . . . and with it we will mail you several authoritative booklets on posture and seating. 62,000 of these posters have been sent to schools the country over. Size 17½ by 25 inches—printed in 3 colors—it graphically shows children why they should sit erect. Hang one in every classroom in your school. Please use the coupon.

AMERICAN SEATING COMPANY, 14 East Jackson Blvd., Chicago, Ill.
Please send me, free and without obligation, a copy of your Posture Poster on correct sitting. Principals and superintendents will be supplied with a poster for each room, on request. Please indicate the number of classrooms.

(ASB 5)

Name..... *Address*.....

Position..... ☐ Number of classrooms.
(Indicate here whether you are Superintendent, Principal or Teacher)

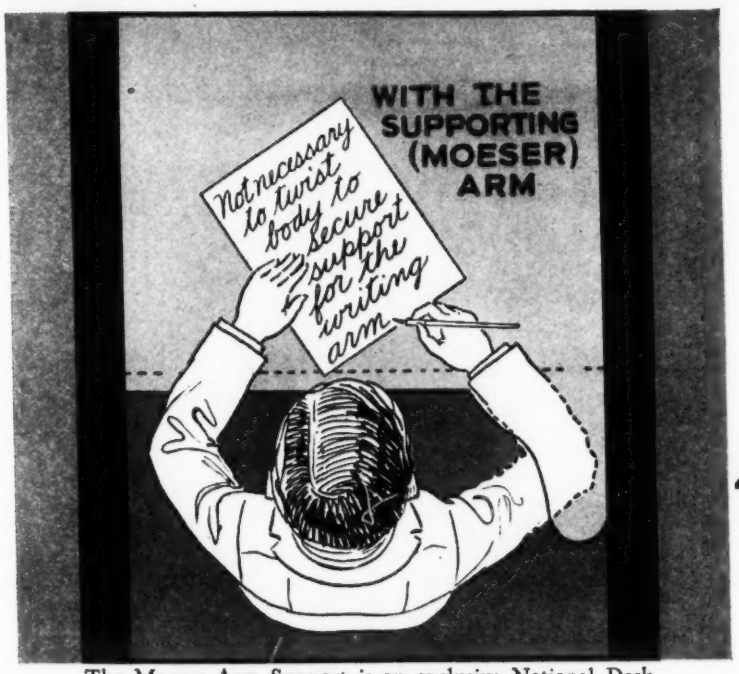
INSIST ON MODERN, POSTURALLY CORRECT SEATING
DON'T LET OBSOLETE SEATING HAMPER CHILD PROGRESS

A complete line of steel base tables and chairs is now available which embraces all of the good qualities that have been combined in other types of seating to form the usual high standard of PEABODY School Furniture. A variety of sizes in both tables and chairs affords seating for all ages and for any type of grouping. Write for circulars and complete information.

THE PEABODY SEATING CO.

NORTH MANCHESTER, INDIANA

No. 181

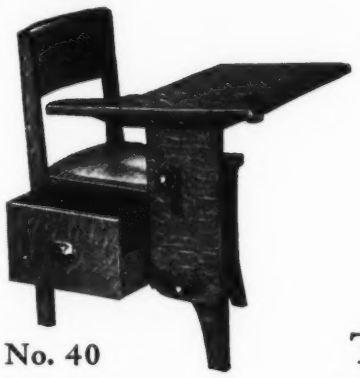


The Moeser Arm Support is an exclusive National Desk feature. Compels correct posture, preventing spinal injury, eyestrain and fatigue. Furnished as optional with all National Desks. More complete details furnished on request.

No. 1133

No. 141

No. 183



No. 40

School Desk Economy Is Given In National Service

. . . . a first cost consideration with gratifying after-saving as well

The school desk is a hygienic measure; not a dead item of equipment. The health preservation and proper physical condition and development of the pupil, are as much a schoolroom demand as the training of the child mind. Attentiveness and responsiveness in class must be nurtured, not retarded. Pupil cost per year (by encouraging advance of pupils and minimizing repeaters) can return bigger economy than what can be saved on school desk price. Correct style, design, size and utility of desk with scientifically right arrangement of the desk group in each room, according to each room's individualities, are therefore vitally paramount . . . a National expert service adjunct which produces a genuine economy of true worth and value. National School Desks have first cost advantages; but, more importantly, also give gratifying and beneficial after-savings, in actual dollar economy proportion. Your inquiry is invited . . . complete catalog sent on request.

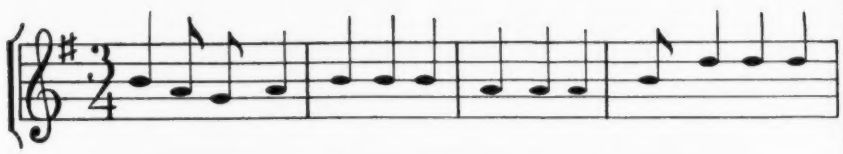
NATIONAL SCHOOL EQUIPMENT CO.
151 Piere Street Port Washington, Wisconsin

No. 131

No. 15

No. 127

NATIONAL School DESKS
Famous for Comfort



"MERRILY WE ROLL ALONG"

THEME SONG OF THE NEW STANDARD ROTARY DUPLICATOR

There's music in the hum of the new Standard Rotary Duplicator as it whirls through its work and there's rhythm in the steady even flow of copies it turns out—clear, flat, tidy looking copies, 50 of them by the minute and 200 from a single original.
Ease—smooth operation—genuine, time saving efficiency—that's the story of the Standard Rotary. For this radically different gelatin duplicator involves no stencils, no stencil cutting and no inking.

SPECIAL STANDARD FEATURES

Over 200 clear, sharp copies from one original—typed, written or drawn.
Uses plain bond paper.
Four colors reproduced in one operation.
Gelatin films instantly interchangeable—can be used over and over again, hence the extremely low cost.
Let us send you complete information applicable to your own duplicating requirements.

Write today—No obligation

Standard

MAILING MACHINES CO.

REVERE ROAD • EVERETT • MASSACHUSETTS

OFFICES IN ALL THE PRINCIPAL CITIES AND FOREIGN COUNTRIES

KVP SCHOOL PAPERS

Meet the Test of Modern Educational Requirements

Scientific laboratory control—everything predetermined—results constantly checked by experts. Modern equipment. Workers whose health is investigated and guarded. These are the elements responsible for the "atmosphere of quality and the ability to meet the test of practice" found in every package of KVP Standardized School Paper.

If we are to have Quality Citizens, we must "serve the youth in our schools with quality tools." Good paper is the most used and most essential tool a student has. These KVP Brands are recognized by educational institutions in this country and foreign lands:

Glendale	*KVP Bond*	*Career*	*Wolverine*	*"Red Bar"*
Glendare	*Clearscript*	*Prosperity*	*"The Guard"*	*Del Rio*

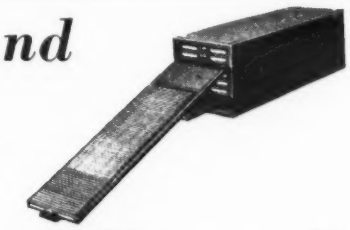
Distribution through legitimate wholesale dealers. Samples can be obtained by addressing—

Kalamazoo Vegetable Parchment Company

Kalamazoo Michigan

"The World's Model Paper Mill"

Get Speed *and* Accuracy in your School Records



Kardex Visible Records bring speed and accuracy to school statistics. Kardex school records are as easy to interpret as they are to compile. The record of a single child or an entire school instantly available at a glance. . . No need for extensive searches to find mis-filed cards. Kardex classifies every needed bit of information where a flip of the card uncovers it. School superintendents, attendance officers, census enumerators find that Kardex Visible Records facilitate their work and eliminate a major part of time devouring detail. . . Remington Rand has prepared an interesting folder on Kardex School Census Records. You should read it. Mail the coupon now!

Remington Rand

BUSINESS SERVICE

BUFFALO, NEW YORK

Remington Rand Business Service, Inc.
Remington Rand Building,
Buffalo, N. Y.

I am interested in Kardex School Census Records.

Name _____

Position _____

Address _____

A. S. B. J.-5

THE PROPHET THAT FOUND HONOR AT HOME------

Representative of STEEL Furniture Installations in Grand Rapids

Above:—Ottawa Hills High School

Right:—Stocking Grade School

Below:—Burton Junior High

"A PROPHET is not without honor save in his own country." So says the good book, and the wisdom and truthfulness of this age-old statement has been demonstrated time without end. Perhaps that's why we so thoroughly enjoy a most notable exception; i.e., practically every new school built in our own community during the last 10 years contains seating equipment by STEEL Furniture Company. Rather irrefutable evidence, we believe, of the outstanding merit of our product.

The complete line contains a type and style of seating equipment ideally suited to every classroom or auditorium requirement.

We will be glad to send you our catalog of modern school seating.

No. 164

No. 5750

No. 192

Scientifically designed, built for a lifetime of perfect service, you will find in the very comprehensive STEEL line the seating equipment best suited to your needs.

STEEL FURNITURE COMPANY

GRAND RAPIDS - **MICHIGAN**

Fort Massac .....folding chairs for schools

The STERLING Model
wood or steel leg braces optional

Fort Massac folding chairs constitute the last word in comfort, beauty and durability. Here is a chair that the schoolman can put into his school and not only solve his special seating problems, but add a real touch of beauty at the same time. And these chairs are built to last. When Fort Massac chairs are installed the folding chair problem is solved indefinitely.

Short, rear legs, pivoted with main frame and seat, give strength and rigidity and prevent side-sway. Can be tipped backward when occupied without folding up.

All parts have been designed to harmonize with each other. Selected, thoroughly dried maple or oak is used throughout. Back and seat frames are continuous wood bendings. Rear legs are sturdy. Panels are of three-ply veneer. Metal parts have smoothly rounded corners and edges to prevent clothing from catching.

Deep, broad, curved, comfortable back panels slant downward and are back fitting. Seats are well padded and covered with durable leatherette or velour to match the finish; also furnished with plain lacquered wood seats.

Maple chairs can be finished in Walnut, Black, Jade Green, and Chinese Red, with Leatherette coverings in Brown, Green, Red, or Black. Other finishes are available. Write for more complete information.

The DE LUXE

The STERLING

The CHAMPION

THE
FORT MASSAC CHAIR
COMPANY
Sales Department: National City Bank Building
CLEVELAND, OHIO
Factory: Fort Massac Park, Metropolis, Illinois

Durable and Attractive

The solid strength of the Norcor No. 40 steel folding chair is hardly apparent in its appearance. It is really attractive, light in weight, and folds quietly and quickly. Finished in brown, $16.50 per dozen, f.o.b. Green Bay, Wis.; special discount for large quantity orders. Many other styles and finishes. Your supply jobber has Norcor chairs.

The NORCOR LINE

Northern Corrugating Co. INC. GREEN BAY, WISCONSIN

SQUIRES INKWELLS

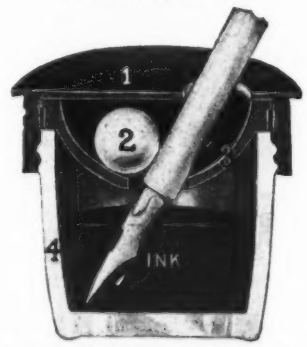
Squires No. 59
Boston Inkwell

We make the Boston Inkwell with three different styles of tops and three styles of glasses, all interchangeable. They fit a $1\frac{27}{32}$ inch hole.

Squires No. 12
Common Sense Inkwell

Our No. 12 or Common Sense Inkwell is made in three sizes, to fit holes $1\frac{1}{2}$", $1\frac{3}{4}$" or $1\frac{7}{8}$". Corks with Caps or Rubber Corks furnished as desired.

Squires No. 14
Self-Closing Inkwell



No. 14 Self-Closing Inkwell has a Hard Rubber Top and fits a 2-inch hole. It is the best inkwell on the market.

Squires No. 3 or
Chicago Inkwell

We furnish a one-lug or a three-lug glass for this inkwell which fits a $1\frac{3}{32}$ inch hole. Nickel Plated.

Write for Catalogue, Prices and Samples.

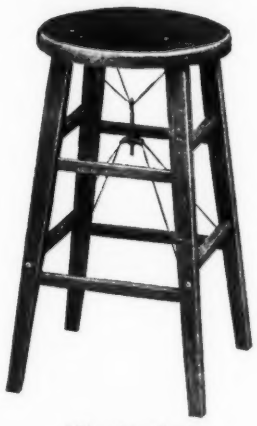
SQUIRES INKWELL COMPANY
Brady Bldg., Third Ave. and Ross St., Pittsburgh, Pa.

"The Standard Line"

Regularly Equipped With

WITTLIFF BRACES

Meets with National School Approval



Illustrating WITTLIFF BRACE on stools

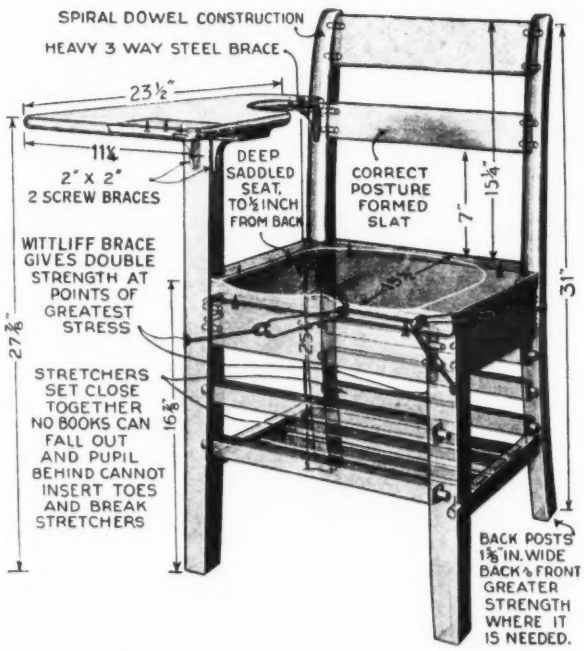
Wittliff Braces

An innovation in practical manufacturing of chairs. We are glad to announce the "Standard Line" **is now** equipped with "WITTLIFF BRACES". At all times the paramount issue in our minds is a comfortable, durable and practical chair at a minimum cost. We have manufactured chairs, to the best of our ability, for years and can truthfully say that never have we offered any single feature of construction that compares with the WITTLIFF BRACE.

Illustrating WITTLIFF BRACE on Bentwood Chairs

Strength

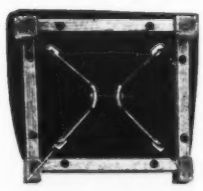
Not every chair will stand the test of hard usage regardless of care, cost or construction. It might seem boastful to say but after seeing our new patterns equipped with WITTLIFF BRACES, they seem to have the strength to last forever. The simple manner in which this brace is constructed makes it possible for anyone to understand why it re-doubles the strength at the points of greater stress. It has positiveness without undue rigidity. It has elasticity without tenseness. It creates resiliency, materially reducing breakage in transportation and use. The tested strength of this brace is 1680 pounds at the weakest point.



The above phantom view clearly illustrates the construction of our No. 399 Tablet Arm Chair showing the WITTLIFF BRACE.

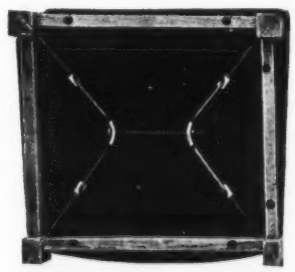
Simplicity

The simplicity of the construction of the WITTLIFF BRACE makes it impossible for it to get out of order. When this brace is embodied as a manufactured part of the chair, it is so placed that nothing further need be done. The equalized tension of the WITTLIFF BRACE necessitates no further thought. It eliminates permanently all repair expense. Remember when purchasing chairs the many advantages of this practical and ingenious device.



Illustrating WITTLIFF BRACE on our Kindergarten and Junior Chairs

Illustrating post construction of WITTLIFF BRACE



Illustrating WITTLIFF BRACE on our Regular Tablet Arm and Teachers' Chair

SEND FOR YOUR COPY OF OUR 1931 CATALOG

STANDARD SCHOOL EQUIPMENT CO.

Incorporated

SILVER CITY NORTH CAROLINA

VOL. 82
No. 5

MAY,
1931

THE AMERICAN School Board Journal

A Periodical of School Administration

Eastern Office:
342 MADISON AVE.
NEW YORK, N. Y.

Published on the first day of the month by
THE BRUCE PUBLISHING COMPANY
524-544 No. Milwaukee Street, Milwaukee, Wis.

Western Office:
66 E. S. WATER ST.
CHICAGO, ILL.

The School Administrative Horizon

The waves of economic rise and decline, which alternately roll over the nation's industrial sea, just now lash heavily against the rock of school administration. And what could be more natural! The men and women who hold within their control the destinies of popular education in the United States, are themselves, in their personal interests, subject to the economic changes which afflict the country.

The trust placed in their hands, namely, the training of the nation's youth, however, permits of no wavering as to a steady forward and upward movement. The school administrator is conscious of that fact. He may in times of depression become more cautious and circumspect, but he does not relax his zeal, his enthusiasm, his efforts. The cause of popular education is too vital, too sacred, too imperative!

Thus the rock of school administration withstands the lashings of a disturbed economic sea with a calm resistance and confidence that tomorrow a brighter day will dawn. The schools must go on!

The time of year has arrived when the school administrator must plan his summer activities. The vacation season is a preparatory season. It contemplates the fall opening of schools. It concerns itself with supplies, equipment, renovations, building operations, and the like.

The "shop early" idea applies as much this year as ever before. Those who would select their school supplies wisely, bargain advantageously, and secure orderly deliveries, must act promptly.

The moral of the situation is: Let's not wait until the schools open. Embrace the advantages of timely action!

THE EDITOR

Subscriptions—In the United States and possessions, $3.00 per year. In Canada, $3.50. In foreign countries, $4.00. Single copies, not more than three months old, 35 cents; more than three months old, 50 cents. Sample copies, 35 cents.

Discontinuance—Notice of discontinuance of subscriptions must reach the Publication Office in Milwaukee, at least fifteen days before date of expiration. Notices of changes of address should invariably include the old as well as the new address. Complaints of nonreceipt of subscribers' copies cannot be honored unless made within fifteen days after date of issue.

Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

The contents of this issue are listed in the *Education Index*.

THE AMERICAN
School Board Journal

Volume 82, No. 5 MAY, 1931 Subscription, $3.00 the Year

THEY MUST COME TO HELP—NOT TO HINDER

A Suggested Reorganization to Improve Articulation and Promotion[1]

Paul C. Stetson, Superintendent of Schools, Indianapolis, Indiana

The emphasis being placed upon devices and methods of procedure which will improve our administrative machinery and which through this improvement will facilitate movement of pupils from grade to grade is a tacit admission that our present arbitrary administrative organization is breaking down at an important point. This, to students of education, is not a new assumption. In 1893 President Eliots' famous Committee of Ten made the same observation. It has been repeated numerous times in a wide variety of reports since then. In 1899 the report of the Committee on Economy of Time by implication pointed out the same failure. As a result of these reports, and others as important if not so well known, the junior-high-school plan of reorganization was proposed in an effort to find a plan which would facilitate articulation.

In recent reports psychologists have called our attention anew to the wide differences among children of the same chronological age and have forced many administrators to devise methods of teaching, reorganization of subject matter, and procedures of administration which will enable us to make a practical application in our classrooms of the findings of these scientific students of education.

Variety of Schemes in Use

It is interesting to note the wide variety of schemes which are in use. In the current yearbook of the department of superintendence[2] listed 28 plans which are used with varying degrees of success for meeting the individual differences of pupils. According to Table 30 the scheme resorted to most frequently and with the greatest success is that of providing a "variation in the number of subjects a pupil may carry" and that the one used least is the "Winnetka technique." One wonders, of course, whether this may be due not so much to the merit of the first plan as to the fact that it is the easiest plan to administer and whether the relatively small number of schools using the "Winnetka technique" may be due to the difficulty the average high-school principal has in introducing it and in finding teachers capable of using it.

Regardless of the plan adopted, several serious practical problems present themselves. Whenever differentiation in the subject matter of any grade is attempted it is a matter of concern as to how this will affect the pupils' progress in succeeding grades. To provide for differentiation of subject matter in English in the primary grades and not to make the same provision in the intermediate grades is to work, of course, an injustice upon the pupils when they enter the upper years. Instead of accelerating the promotion rate, such a course might and probably would only defer the retardation rate to later school years. Any scheme of differentiation of subject matter must be city-wide and must include all grades if it is to achieve the results hoped for.

What may function in large cities may not be practicable in smaller cities. Many difficulties not found in our larger systems are present in smaller units. The size of the groups must be large enough to admit of differentiation. Small elementary- and high-school units do not lend themselves readily in a practicable scheme of administration to such a plan.

How Classify Pupils?

The actual working out of the difficulties of grouping pupils of varying levels of ability is

MR PAUL STETSON
Superintendent of Schools,
Indianapolis, Indiana

not the only problem present. Some means must be found to determine the basis upon which the pupils shall be placed in their respective and proper fields of learning. Ordinarily this means a testing organization quite outside the reach of smaller systems and not yet adopted by all of the larger. It also presupposes that we have for all systems, large or small, a technique of testing which will give us a basis for classifying pupils. This is a point upon which many are not agreed.

Section D in the report referred to discusses the plan of differentiation and classification used in Baltimore. Undoubtedly this is one of the most elaborate and successful devices we have and represents an extremely intelligent attempt to meet an aggravating situation. Ignoring for the moment those pupils who are geniuses and those at the other end who are definitely feeble-minded or are recognizable borderline cases, one wonders, even in Baltimore, who is brave enough or wise enough to make a definite classification of pupils as "dull" or "bright." Surely such a classification has implications for the child concerned which should make even a supervisor pause. It assumes, in short, a technique in classifying children which is being attacked more and more vigorously from many sides. Until an accepted method for discovering the ability of that great group of pupils who are neither exceptionally bright nor extraordinarily slow has been devised, many will hesitate arbitrarily to classify pupils in such a way as will give to them the consciousness that they are in some important aspects inferior to their fellow pupils. This is not in any sense a criticism of the Baltimore system, but expresses a question which is in the minds of many.

Permanent Overhauling Needed

Rather than to differentiate courses of study and have such courses taught in class groups as custom and practice decrees, we would suggest an alternative plan. The content of several courses can without question be varied to meet several levels of difficulty. The evidence on this is so conclusive as to leave no room for doubt. In addition to this differentiation of subject matter should come a radical readjustment of our whole school organization.

Our present school organization is built upon the belief that the grading of children is feasible and proper and that it is possible to determine just at what point each child may progress to a higher grade. This point is customarily at the end of a school year or a school semester. So widely is this accepted by teachers, principals, parents, pupils, and textbook publishers that it will be an exceedingly difficult task to change it. Nevertheless, many of us believe that while such devices as are mentioned in the current yearbook may have some merit and may postpone a complete change in our present organization, a thoroughgoing overhauling of our present educational machinery is indicated as the only permanent solution.

We recognize, of course, that a system divided into twelve units (not considering for the moment the kindergarten) with five shades of differences between them and with only the most vague idea as to the proper entrance requirements into each unit is an anachronism. The more one studies the mass of evidence presented in the present yearbook and constantly coming before one from other sources indicating so clearly the ineffectual way our present organization is functioning in regard to two such vital questions as pupil promotion and articulation, the more one is led to the conclusion that not palliatives in the way of various devices, but radical changes in our school organization will be needed before a final solution is reached.

A Plan Suggested

One step in such a reorganization would be to eliminate all grade distinctions in grades one through nine and to recast these years into three divisions, the primary, the intermediate, and the junior high school. Entrance into the primary group would depend upon the pupils' mental, physical, social, and chronological maturity. Within each group the content of the subject matter would be organized upon the "Winnetka technique," the "Dalton plan," or any other basis which allows for individual progress at the maximum rate for each pupil. Instead, then, of pupils being cataloged as "first" grade or "sixth" grade, they would be known as being in the primary division.

Entrance into the intermediate group would occur at any time during the school year whenever, in the combined judgments of the teachers and supervisors, each case had reached that degree of physical, mental, and social maturity which entitled him to this advancement. As an aid to the teacher in making such a recommendation, any devices such as intelligence tests would, of course, be available. The same procedure would apply when admission to the junior-high-school division was indicated.

Within each group the subject matter would be so organized as to meet the needs of the individual pupil. The absence of formal class recitations would make possible the differentiation of subject matter to a degree not now possible.

In the junior-high-school division the pupil would continue his individual progress in all of the major academic subjects and in such electives as the school offered. In all probability, however, the free articulation between divisions could not, because of college-entrance requirements, prevail between the junior and senior group.

Objections to be Overcome

There are, as in the case of the plans now in operation, many objections which would be raised against this suggestion. The chief one, of course, would be the difficulty of combating tradition on the part of administrators and teachers on the one hand and parents on the other. This would undoubtedly prove a great obstacle.

(Concluded on Page 127)

[1]Digest of an address before the annual dinner of the New Jersey School Men, Hotel Tuller, Detroit, Mich., February 23, 1931.

[2]*Ninth Yearbook*, chap. VI, p. 112.

Selecting the Junior-High-School Principal

Frank K. Foster, Director of Cadet Teaching, University of Washington

The past two decades of pioneering in the reorganization of the American eight-four plan of education have quite firmly fixed the junior high school as an articulate unit in our educational system. Many practices, irrational but firmly grounded in the principle of equality of educational opportunity for all, have been employed to establish that diversity of educative opportunity which is the backbone of the junior-high-school idea. Any attempted justification of the new junior-high-school unit by sheer numbers or by the rapid acceptance of the junior high school (in name at least) by local communities would be fallacious. In too many instances, various combinations of upper elementary grades and lower high-school grades have been assembled in one administrative group, the name plate on the school has been changed, a magic wand has been waved, and voilà — a junior high school.

We have taken for granted that the problems and functions of any school executive are fundamentally the same. Despite the reorganization for instructional and administrative purposes, the assumption has been made that the organizers and administrators of this new unit with its multitudinous new problems have completed metamorphosis in terms of the specific functions of the junior high school. Obviously, the principal has the responsibility of molding the destiny of the institution. All of the modern and extensive paraphernalia which contribute to the educational success of the junior high school will go for naught without capable, businesslike, and professional direction in the hands of a man with the personal attributes of a leader. Hence the selection of the principal for the junior high school is a vital consideration.

Why Men for the Principalship?

What is the composition of the measuring stick for the junior-high-school principalship? A recent national study[1] of the incumbents of the junior-high-school principalships and of the selective criteria employed by city superintendents in the election of junior-high school principals suggests the factors by which applicants should be measured, as follows: personal factors, source, preparation, experience, and activities.

The economic status of teaching has been for many men a deterring factor in choosing teaching as a profession. The number of women in elementary principalships exceeds the number of men, but the converse is true in the high-school field. The present status in the junior high school indicates a total of men far in excess of women principals. The larger junior high schools with very few exceptions are directed by men. In 440 junior high schools in all states, 87 per cent of the principals are men. The reactions of 104 superintendents indicated a preference for a man, and 50 per cent invariably select a man for the junior-high-school principalship. Professors of education, who have studied extensively in the junior-high-school field, indicated unanimous choice of a man for the principalship. The recommendations of superintendents and professors of education in the junior-high-school field agree with the existing status of a preponderance of men in the junior-high-school-principalship. Doubtless, the junior high school will continue to attract men to the position. The mere fact that it is, for the major part, filled by men does not, however, justify the practice. The preference for men should, obviously, stimulate greater numbers of men to prepare adequately for this important position.

The age of the applicant for the principalship often plays an important part in his chance for election. While a fixed age standard is not desirable, numerous school systems have established maximum and minimum age scales. The present junior-high-school principals are materially older than one would expect them to be in a relatively new organization. The preference of city superintendents and professors of education shows agreement, however, on the most desirable age as 30 to 35 years. Twenty-five to 29 years is the minimum age range. Most of the studies of administrative positions reveal the median age of 27 for the beginning principal. Definite plans for the principalship will allow sufficient academic and professional preparation and teaching experience with the minimum beginning age as 25. A consideration of a man's qualifications and ability for the specific position is a better criterion than age for determining the appointment of the junior-high-school principal.

[1]Foster, Frank K., "Status of the Junior High School Principal," *Office of Education Bulletin*, 1930, No. 18.

The junior high school at the present time offers both the greatest variety and most difficult of administrative problems confronting the school board and the superintendents as well as the finest opportunity for forward-looking planning and improved standards of service. The junior high school is not fettered by traditions and practices of the past and both superintendents and school boards are free to develop improved practice in organization and administration. The central problem is the principal who gives to the junior high school its character and standards of efficiency. The board of education which employs a forward-looking principal is thereby solving half the problems of the junior-high-school unit. The present paper contains very suggestive and helpful principles and methods.— The Editor.

Local vs. Outside Candidates

The question often arises in the consideration of the junior-high-school principalship, "Shall we take someone from our own corps, or go outside?" Either procedure may be without justification. The qualified material available should be the first consideration. If the local system contains qualified men for the position, the professional morale is enhanced through local selection. Dependence upon local material, however, often defeats the purpose of the junior high school. The "seniority complex" is without justification in the selection of principals from the local corps. Get the best man available for the position, with preference for local material, when other appointment factors are equal. A few school systems have established a commendable policy in the appointment of junior-high-school principals. The building program in a large city enables the school administrators to determine the principalship needs in advance. A capable principal, usually from the elementary schools, is prepared for the position for several months or even a year before the scheduled opening of the school. Knowledge of local administrative policies and local contacts provide a background for ready adaptation to the new position. Smaller school systems and irregular vacancies in larger schools cannot anticipate their needs, with the result that the best man available, not always the best man for the position, is selected.

If circumstances permit, school officers should anticipate their needs to the end that early selection for the position will permit a period of adjustment for the principal before the actual opening of the school. A poor start and a strong finish may be justified in racing practice, but in school practice, a poor start usually results in mediocrity or worse. School officers can select promising young men in their corps for specific training for a junior-high-school principalship. The incentive for intensive study lies in the demand for well-trained junior-high-school principals. Training institutions must recognize, at an early date, the need for specific curricula for the junior-high-school principalship.

The Background of Training

One of the universal questions which confront an applicant for any position is the type and degree of training. During the past few years there has been a tendency to specify graduation from a four-year college or university for high-school work and two years of normal school for elementary work. The advent of the junior high school presented a question of defining a standard of academic preparation for those engaged in various capacities in this new unit. Many conceived the junior high school to be essentially an elementary school, while others insisted that the new unit was fundamentally a secondary school. The background of academic training of the present junior-high-school principals points toward a higher level than the prevailing standards for elementary-school work.

The high-school preparation of the junior-high-school principals is distinctly the traditional four-year high school. The entrance requirements of higher institutions will continue, in all probability, to prescribe the same degree of secondary preparation for preprofessional and professional study. The comparatively large number of principals with normal-school training cannot be ascribed to requirements for the position, rather the fact that the majority of the present principals were selected from the elementary field is indicative of the type of academic training found. Two fifths of the men and three fifths of the women principals have had normal-school training. College and university training of the present principals is a wide variable. Some states have classified the junior high school with the senior high school for certification purposes. The large number with the bachelor's degree indicates a noticeable trend toward higher standards of preparation for the junior-high-school principalship. A relatively greater number of men (81.2 per cent) than women principals (46.6 per cent) are graduates of a college or university. A shift of emphasis after entering upon the junior-high-school principalship accounts for the large number of college graduates. The demands of the position have given impetus to extended training.

Higher Academic Training Asked

City superintendents and professors of education report a desired practice which exceeds the training of the present principals. Four years of high-school preparation are requisite. Normal-school preparation is given little emphasis, while college or university graduation is considered essential. A higher standard of training is to be expected if the recommendations of city superintendents and professors of education are indicative. The master's degree will be an essential part of the training of future junior-high-school principals, and present principals will guard their laurels by attaining an academic preparation commensurate with the more recently trained competitive group.

The specific fields of academic preparation will be a wide variable owing to the purposes and programs of studies in local communities. There is, however, considerable emphasis on an extensive liberal-arts background with specific training in education. The chief fields of professional preparation which are recommended by

city superintendents and professors of education are: junior-high-school organization and administration, psychology of adolescence, high-school curriculum, principles of secondary education, educational measurements, vocational guidance, educational psychology, and school supervision. The present junior-high-school principals, though lacking in specific preparation for the problems of the junior high school when they entered the principalship, have materially enhanced their status by extended professional study.

The Problem of Experience

One criterion in the selection of junior-high-school principals is the question of experience. Though we may assume that all types of experience are assets for the junior-high-school principalship, certain types or grade-levels of teaching or administrative experience are factors for consideration in the appointments to principalships. Only 10 per cent of the present junior-high-school principals have had less than five years of school experience before becoming principal of a junior high school. Two fifths of the principals had their first administrative experience as an elementary-school principal. Fifteen per cent of the principals did their first administrative work as a junior-high-school principal. The undergraduate occupational plans of the present incumbents indicate a lack of specific preparation for junior-high-school principalships. Slightly more than one half of the principals planned to enter educational work while undergraduates.

The reasons for entering upon the junior-high-school principalship are indicators which substantiate the evidence that the elementary school is the administrative-experience background of present junior-high-school principals. A high standard of professional interest is evidenced in the stated reasons for entrance upon the junior-high-school principalship. Although the economic factor of higher salary was the chief incentive, the dominant interests in other subjective professional phases of the work are a fair barometer of a high degree of professionalization. The interest in the age-grade organization indicates a comprehension of the opportunity for the proper educational development of boys and girls. The frequency of mention of promotion as a reason for entering the principalship is indicative of a high degree of selectivity in the appointment of the junior-high-school principals.

Although junior-high-school principals have been selected from the elementary principalships, city superintendents and professors of education emphasize a preferential experience in place of the elementary principalship. The junior-high-school vice-principalship is the desired field of experience from their point of view. Junior-high-school teacher experience receives second emphasis as preparatory for the junior-high-school principalship. Since the selective agents have shown preference for these types of antecedent experience, the plan of the principal in training may well be shaped in terms of these experiences. Lack of preparatory training of the present junior-high-school principals may account for the recommendations of present superintendents of schools. The recommended in-service experience would supplant, in part, the lack of specific preparation. The possibility that elementary and senior-high-school experience prior to the junior-high-school principalship would be given greater recognition is entirely possible if prospective principals were adequately trained in the junior-high-school principalship. The articulation of the elementary school, the junior high school, and the senior high school would be enhanced through the resultant understanding of the common problems of the three units.

There is some evidence that the recruiting ground for men in junior-high-school principalships has been among high-school teachers and principals although the majority of the women principals have been recruited from the elementary principalship. Capable persons who have had junior-high-school experience and training should be given preference among candidates for the principalship. The real difficulty with women may be due to their lack of adequate academic preparation; many are only normal-school-trained elementary-school teachers.

The Principal and the Public

Much stress has been placed on the strategic position which the public-school administrator holds as the liaison officer between the public schools and the community. The new social functions and community relations mean a new conception of the work of the principal. The public schools are obviously a functional part of the community. The degree to which the schools achieve the purposes for which they are maintained depends to a large extent upon the wise leadership and the vision of those who direct the policies of the schools. With the great variety of social pressure, some with ulterior motives, which seek an outlet through the public schools, the contacts of the principal in his official capacity must of necessity be made with discretion. The varieties of socio-civic organizations with which the principal may come in contact or with which he may be affiliated are too numerous to mention. Active participation in the spirit of commendable service organizations provides the chief means whereby the principal may acquaint the public with the schools, the things they are doing, and the things that need to be done. The school administrator should be well versed in the problems of school publicity and the techniques of presenting the needs and the achievements of his school to the public. This implies a higher degree of professional training for the principal in service, and the training institutions can ill afford to neglect this phase in their preparation of public-school administrators.

Affiliation with and attendance upon educational organizations and meetings are measures of professional interest. Recency of attendance at summer school or participation in professional courses by home study or extension indicates a progressive attitude toward professional advancement. The leisure activities of principals have vital bearings upon the educational attitude of the community. These tangents of the principal's activities cannot be neglected in the program of selection of principals.

There is a general recognition that many public-school administrators have not been thoroughly trained for their work, either generally or specifically. The personal equation is an important but intangible one. Assuredly, the school executive must possess superlative personal qualities. His rôle is one of kindness, sympathy, vision, and courage. No longer is the principal a figurehead, nor is he an autocratic leader; rather, he is concerned with the adjustment of the school in all its aspects to the needs of the pupils and of a democratic society. There is one thing of which we are certain: "Just anyone" will not meet the standards and obligations of the junior-high-school principalship. The anticipated rapid growth of the junior-high-school movement will call for more and better-trained principals. The administrative personnel of public schools and teacher-training institutions can assure greater success for the junior high school through the process of selecting junior-high-school principals. *Select, then prepare,* is better than *appoint, then prepare!*

Favorable School Legislation in Arkansas

It is reasonable to assume that the law books of many of the states are lumbered up with superfluous and conflicting verbiage. This applies as much to laws dealing with the schools as it does to other departments of government. The plea on the part of state school officials for a proper codification and simplification of school laws has frequently been heard in recent years.

As a rule, the enactment of new laws is deemed more imperative than the modification or elimination of the old, with the result that with the progress of time the incorrected inconsistencies are unconsciously multiplied. It is only through extraordinary efforts, and a comprehensive approach to the task, that needed legislation designed to correct evils, either through new laws or the amendment or elimination of the old, is effected.

A legislative task which implied a sweeping change in school laws has just been accomplished in the State of Arkansas, through the leadership of State Supt. C. M. Hirst. While the question of the simplification of the school laws of the state was met by reducing the legal verbiage to one fifth of its former size, the enactment of new laws constituting a radical departure from the old was also effected.

"We had laws," said State Supt. Hirst, "that had accumulated during the entire history of the school system of the state, many of them being conflicting and the courts had great trouble in making decisions and interpretations of the school law. Acts had been passed and at later sessions been partially repealed by other acts. This new law repeals all laws enacted previous to this time and gives us a simplified school code."

In the new law both the state and county officials are selected by state and county boards who are elected at the school election rather than political elections. The state board is composed of seven members, one from each congressional district. They are selected for a term of seven years with only one member's term expiring each year. The county board of education is composed of six members, two to be elected each year for a term of three years.

Consolidation laws are simplified and it is possible either by election or petition to place the entire county in one school district in which case the county board of education assumes all duties performed by the county board of education and district boards under the district system.

The bonding laws of the state have been completely rewritten, placing a limit on the amount that a school may borrow. This limit is 7 per cent of the assessed valuation. Provision is made so that funds will be set aside each year to retire bonds and interest. All bond issues must be approved by the state board of education before a legal sale can be advertised.

"The most outstanding provision incorporated in the law is a budget system," says Mr. Hirst. "Each school board is required to make a budget by June 1 to be approved by the county board of education, showing the amount of money spent the previous year and the income for the previous year, showing also the anticipated income for the following year and the amount that is proposed to be spent and for what purpose. No school board can exceed its income for any one year. When the entire income is spent the school is to be closed and in case the directors make a greater deficit than existed the previous year they are personally liable for that amount. It will compel school directors to conduct the affairs of schools in a businesslike manner. The certification of teachers is placed in the hands of the state board of

(Concluded on Page 127)

Equipment, Duties, and Salaries of School Janitors in Wisconsin

Russell L. C. Butsch, Professor of Education, Marquette University, Milwaukee

The present study is based primarily on a brief questionnaire which was sent out during the autumn of 1930 to superintendents of schools over the State of Wisconsin. Some data were obtained from 85 different communities, including 123 schools and 182 janitors. Since the completeness of the data varied from item to item, the following tables will not always be based on the numbers of cases here mentioned. The schools for which data were obtained have been divided into five groups: elementary schools, four-year high schools, junior-senior high schools, elementary- and high-school combination, and a miscellaneous group. The number of schools included in each group will be indicated in several of the following tables. Data from Milwaukee are not included.

Heating and Ventilating Equipment

Since the amount of work involved in caring for a school may be determined in part by the type of heating and ventilating equipment in use, data on this point were obtained. Table I indicates the percentage of schools of each class that are provided with the particular type of equipment listed. It will be seen from this table that 81 per cent of the schools use some type of central-fan system of ventilation. The remainder of the schools are divided as follows: 13.5 per cent open-window ventilation; 5.2 per cent unit ventilators. It will be observed also that a majority of the schools use steam for heating, although nearly 20 per cent depend on a central fan hot-air system to supply all of the heat.

TABLE I. Heating and Ventilating Equipment in Use in Wisconsin Schools (Expressed in Percentages)

Equipment	*Elementary* (47)	*Elem. and H.S.* (22)	*Jr.–Sr. H.S.* (15)	*High School* (31)	*Miscellaneous* (8)	*Total* (123)
Fan	74.5	72.7	93.3	90.3	87.5	81.3
Hot air	21.3	22.7	20.0	12.9	25.0	19.5
Hot water	2.1	9.1	0.0	6.5	0.0	4.1
Steam	61.7	40.9	60.0	64.5	50.0	57.7
Hot air and steam	15.9	27.3	20.0	9.7	25.0	17.1
Stokers	17.0	18.2	26.7	19.4	25.0	19.5
Thermostats	72.3	68.2	86.7	83.9	87.5	77.2

Seventeen per cent use the split system, including both hot-air and steam radiators in the rooms. Nearly 20 per cent of the schools are provided with automatic stokers. Over three fourths of the buildings make use of thermostats to control the temperature of the rooms.

Cleaning Equipment

The types of cleaning equipment provided in the various schools are indicated in Table II. Ninety-four per cent of the schools depend entirely or largely on the use of floor brushes. Twelve per cent of the buildings are provided with vacuum sweepers, although in some cases this equipment is not regularly used. Forty-eight per cent make use of treated floor mops; while only 17 per cent of the buildings are equipped with electric scrubbing machines. Nearly half of the buildings are provided with vacuum eraser cleaners, while the remainder apparently still use some less-efficient method of cleaning erasers.

TABLE II. Percentage of Schools Provided with Various Types of Cleaning Equipment

Equipment	*Elementary* (47)	*Elem. and H.S.* (22)	*Jr.–Sr. H.S.* (15)	*High School* (31)	*Miscellaneous* (8)	*Total* (123)
Floor brush	93.6	100.0	93.3	90.3	100.0	94.3
Vacuum sweeper	10.6	13.7	6.7	6.5	50.0	12.2
Treated floor mop	40.4	63.7	53.4	76.2	25.0	47.9
Electric scrubbing machine	8.5	9.1	40.0	16.1	50.0	17.1
Vacuum eraser cleaner	40.4	54.5	46.7	54.8	62.5	48.9

School Grounds and Equipment

There is a very wide variation in the area of the school grounds reported for the buildings included in this study. The range is from ¼ acre to 34 acres. Table III presents the distribution of areas for the various types of buildings. It is apparent that in general the elementary schools have the smallest school grounds, the median size in the case of the elementary- and high-school combination being slightly over two acres, and the median in the case of the elementary schools being about 1½ acres. For senior-high-school buildings the median is nearly 2¼ acres, and for the junior-senior combination the median is slightly over 2 acres. In the case of the elementary schools 41, or 87.2 per cent have provided some sort of playground equipment, ranging from a few swings to more than a half dozen different kinds of apparatus. In the case of the combination elementary- and high-school buildings, 17, or 81.0 per cent have provided playground equipment.

TABLE III. Areas of School Grounds

Area in Acres	*Elementary*	*Elem. and H.S.*	*Jr.–Sr. H.S.*	*High School*	*Miscellaneous*	*Total*
Less than 1	19	3	5	5	3	35
1–1.99	10	6	1	8	3	28
2–2.99	9	6	4	7	..	26
3–3.99	3	..	..	3	..	6
4–4.99	1	3	2	3	..	9
5–5.99	4	2	..	2	..	8
6–6.99	1	..	2	..	1	4
7–7.99	..	..	..	1	..	1
8–8.99	..	..	..	..	1	1
9 or over	..	2	1	2	1	5
Medians	1.5	2.3	2.5	2.4	1.2	1.6

Usually the most important duty of the janitor in connection with the school grounds is that of caring for the lawn. The question of the kind of equipment with which he is provided for this duty is therefore of some importance. Table IV presents the data concerning the type of lawn mower provided in the various classes of schools. It is obvious that a large majority of the schools still rely on the hand mower. A few added the explanatory note that they had small lawns. However, counting those who reported only power mowers, and those who reported both kinds, nearly a fourth of the schools are using power mowers for all or a part of this work.

TABLE IV. Percentages of Schools Providing Lawn Mowers

Type of Mower / *Number of Schools*	*Elementary* (47)	*Elem. and H.S.* (22)	*Jr.–Sr. H.S.* (15)	*High School* (31)	*Miscellaneous* (8)	*Total* (123)
Power mower	8.6	22.7	33.3	19.4	....	16.3
Hand mower	74.5	63.6	60.0	70.9	87.5	70.7
Both	6.2	9.1	....	6.5	12.5	6.5
Neither	10.7	4.6	6.7	3.2	....	6.5
	100.0	100.0	100.0	100.0	100.0	100.0

Special Duties of Janitors

In addition to the regularly accepted duties of janitors in connection with keeping the building clean, there are a number of special duties which are sometimes required of the janitor, but are sometimes delegated to the children or to specially employed help. The questionnaire asked whether or not janitors were required to perform 11 of these special duties. The results are tabulated in Table V for the various types of schools. In making this tabulation only those schools were entered for which the answer was unqualifiedly yes. If the answer was limited or qualified in any way, the school was omitted. Thus the table represents the minimum percentage of schools requiring each of the duties to be performed. The table indicates that the duties required most frequently are "keep the playground free from rubbish"; "mow the lawn"; and "wash windows." Those required least frequently are: "repair broken windows"; "clean blackboards"; "be present in the building when evening activities are scheduled." In the case of repairing broken windows, some qualified their answer by specifying only in the case of small ones. In the case of cleaning blackboards, some specified that this was done only at infrequent intervals. In connection with the last item in the table it should be noted that 59 schools, or 48 per cent, allow their janitors to accept extra compensation for evening activities. In some cases this is allowed only for activities not connected with the school.

Although Table V indicates that each of the duties was performed by a majority of the janitors involved, it does not follow that a majority of the janitors perform all of the duties. In order to discover the number of these special duties required of each janitor in the various types of schools, Table VI was constructed. This table gives the distribution of the janitors according to the number of duties required of them. The mean number in the case of each type except the miscellaneous group of schools is approximately 9, and the mean for the total group of schools is also slightly over 9.

How Supplies Are Obtained

In answer to the question concerning the method used by the janitor in obtaining supplies, the following replies were received:

Supplies are obtained either on formal requisition, or on informal request, through the superintendent or through his office, in 84 cases, or 68.3 per cent.

Supplies are obtained through the principal in 14 cases, or 11.4 per cent.

TABLE V. Percentages of Schools Requiring Janitors to Perform Certain Special Duties

Special Duty* Number of Schools	Elementary (47)	Elem. and H.S. (22)	Jr.–Sr. H.S. (15)	High School (31)	Miscellaneous (8)	Total (123)
a	95.7	90.9	100.0	90.3	87.5	94.3
b	89.4	95.5	93.3	96.8	87.5	93.4
c	93.6	68.2	93.3	83.9	75.0	86.1
d	89.4	95.5	86.7	96.8	75.0	91.8
e	72.3	72.7	46.7	67.7	75.0	68.9
f	85.1	96.4	73.7	93.5	75.0	86.1
g	91.5	90.9	80.0	93.5	75.0	90.2
h	70.2	72.7	73.7	93.5	50.0	77.0
i	74.5	68.2	93.3	93.5	75.0	81.2
j	93.6	72.7	100.0	87.1	75.0	88.5
k	74.5	90.9	86.7	64.5	75.0	77.0

*a. Keep the playground free from rubbish
b. Mow the lawn
c. Keep the sidewalks free from snow
d. Wash windows
e. Repair broken windows
f. Install seats and desks in classrooms
g. Adjust seats in classrooms
h. Clean blackboards
i. Clean blackboard erasers
j. Put up the flag
k. Be present in the building when evening activities are scheduled

Supplies are obtained through requisition directly to the board of education in 5 cases, or 4.1 per cent.

Supplies are obtained directly from the Supply Department in 4 cases, or 3.3 per cent.

In 1 case the supplies are obtained from the business manager. In 2 cases the janitor is allowed to buy his own supplies. In one of these it is indicated that he presents the bill to the board of education. In the other case no explanation is offered.

This question was omitted on 14 of the blanks.

TABLE VI. Distribution of Janitors by Types of Schools According to the Number of Special Duties Listed in Table V Required of Them

No. Duties Required	Elementary	Elem. and H.S.	Jr.–Sr. H.S.	High School	Miscellaneous	Total
11	12	6	3	8	1	30
10	14	2	5	9	..	30
9	10	6	2	10	2	30
8	4	4	2	3	3	16
7	4	4	1	1	1	11
6	2	..	2	..	1	5
5	..	..	..	..	..	..
4	1	..	..	..	..	1
Total	47	22	15	31	8	123
Mean	9.3	9.1	9.1	9.6	8.2	9.3

The Number of Months Janitors Are Employed

Table VII presents the data on the number of months in the year for which janitors are employed. Two groups only are indicated, those employed for the entire 12 months of the year, and those employed for a shorter time. Most of the latter are employed either 9, 9½, or 10 months, evidently for the period school is in session. It will be observed that in general something over 80 per cent of the janitors are on a 12 months' basis. The smallest percentage, 72.1, is found in the elementary- and high-school combination buildings. This particular type of combination is found, generally, in the smaller communities, which probably accounts for the percentages found.

TABLE VII. Number of Months Janitors Are Employed (Expressed in Percentages)

No. of Months	Elementary	Elem. and H.S.	Jr.–Sr. H.S.	High School	Miscellaneous	Total
12	78.2	72.1	81.6	89.1	93.3	81.6
Less than 12	21.8	27.9	18.4	10.9	6.7	18.4

Number of Janitors Employed

In order to discover some measure of the amount of work performed by each janitor, and the number of janitors employed in schools of various sizes, various ratios were computed. The total number of rooms in each building was recorded from the questionnaires, certain arbitrary allowances being made for rooms other than regular classrooms. From this number of rooms in the building there was determined the number of rooms per janitor in each building. Table VIII presents the distribution of schools according to the number of rooms assigned to each janitor. The range is from 4 to 42 rooms, and the average for the 116 schools is 14.6 rooms per janitor. Although the total range is rather wide, most of the schools are found between 8 and 17 rooms per janitor.

Another very similar measure is that of the number of teachers per janitor. The data on this point were also tabulated from the questionnaires, from the answers to the questions concerning the number of teachers in the school, and the number of janitors. The data on the distribution for the entire group of schools are included in Table IX. The range is found to be from 4 to 30 teachers per janitor, while the average is 11.8. The mode in this case is in the interval 7.5 to 9.4, with the interval 9.5 to 11.4 a very close second. In fact, over 50 per cent of the schools are included in these two intervals.

A third measure of the amount of work which a janitor will have to perform may be obtained by determining the number of pupils per janitor. Since the questionnaire also asked the number of pupils in the building, it was possible to obtain this ratio. Table X presents the data on the distribution of schools on the basis of the number of pupils served by each janitor. Again the range is rather wide, from 57 to 774. The mean is found to be 310. The mode in this case falls in the interval from 250 to 299; and the median is at 280. The latter number may be a slightly more representative measure of central tendency than the mean, which is strongly influenced by the few cases above 500.

In order to discover the variation between types of schools in these three factors, the data in Table XI were computed. This table indicates the average number of teachers, rooms, and pupils per janitor in each of the five types of schools included in the study. It is apparent that the elementary schools have, on the average, fewer teachers and fewer rooms for each janitor, while the high schools have fewer pupils per janitor.

TABLE VIII. Distribution of Schools According to Number of Rooms per Janitor

Rooms per Janitor	No. of Schools	Rooms per Janitor	No. of Schools
42–43	1	22–23	4
40–41	—	20–21	5
38–39	—	18–19	7
36–37	—	16–17	14
34–35	—	14–15	17
32–33	3	12–13	8
30–31	1	10–11	24
28–29	2	8– 9	15
26–27	2	6– 7	6
24–25	3	4– 5	4
Mean.....14.6 rooms			

TABLE IX. Distribution of Schools According to Number of Teachers per Janitor

Teachers per Janitor	No. of Schools	Teachers per Janitor	No. of Schools
29.5–31.4	2	15.5–17.4	6
27.5–29.4	—	13.5–15.4	9
25.5–27.4	—	11.5–13.4	16
23.5–25.4	2	9.5–11.4	26
21.5–23.4	2	7.5– 9.4	27
19.5–21.4	4	5.5– 7.4	9
17.5–19.4	6	3.5– 5.4	7
Mean.....11.8 Teachers			

TABLE X. Distribution of Schools According to the Number of Pupils per Janitor

Pupils per Janitor	No. of Schools	Pupils per Janitor	No. of Schools
750–799	1	350–399	8
700–749	2	300–349	14
650–699	1	250–299	24
600–649	1	200–249	22
550–599	2	150–199	10
500–549	3	100–149	10
450–499	5	50– 99	1
400–449	12		
Mean.....310 Pupils		Median.....280 Pupils	

TABLE XI. Average Number of Teachers, Pupils, and Rooms per Janitor in the Various Types of Schools

Type of School	Ave. No. of Teachers per Janitor	Ave. No. of Pupils per Janitor	Ave. No. of Rooms per Janitor
Elementary	8.5	301	11.0
Elementary and High School	12.5	302	17.7
Junior-Senior High School	13.5	316	17.7
High School	10.5	269	15.6
Miscellaneous	14.0	370	17.3
All Schools	11.8	310	14.6

It is fairly evident from the above tables that there is little agreement among school authorities in Wisconsin as to the number of rooms, teachers, and pupils that can be served by one janitor. Of course, many of the extreme cases at the lower end of each of the distributions are caused by the presence of small schools. If there are only from 4 to 8 rooms and the same number of teachers in a school, it is obvious that the services of one janitor will still be required. An important question arises, however, as to the exact point at which a second janitor should

TABLE XII. Number of Rooms in Buildings Employing One, Two, or Three Janitors

No. of Rooms	Number of Schools Employing: One Janitor	Two Janitors	Three Janitors
4– 5	3	..	..
6– 7	3	..	..
8– 9	10	..	..
10–11	16	1	..
12–13	5	..	..
14–15	5	5	..
16–17	9	3	..
18–19	2	1	..
20–21	4	..	1
22–23	3	4	1
24–25	2	3	..
26–27	1	1	2
28–29	2	2	..
30–31	1	2	1
32–33	3	1	..
34–35	..	1	..
36–37	..	3	..
38–39	..	1	..
42–43	1	..	1
48–49	..	..	1
52–53	..	1	..
Total	70	28	7
Median	13	24	31

(Continued on Page 127)

School Administration in Action

Improving School Transportation

How Sandusky County Has Set Higher Standards for Rural Bus Transportation

In January, 1931, all the school vans operating in Sandusky county, Ohio, were assembled in the county seat for a general check-up by the county superintendent, Mr. H. E. Ryder, and by other state and county officials.

The check-up was threefold: First, the busses were gone over in a general way by the entire group of state and county officials. A study of the accompanying picture will reveal each driver located in front of the van which he drives. It is needless to say that on the occasion of the annual check-up the van was in the best possible condition. The driver had washed it and in a number of cases had painted the car and touched up the interior.

The second check-up consisted of an examination for chauffeur licenses held under the direction of Colonel George Florence, a representative from the Ohio Secretary of State office.

The third check-up was a physical examination of all the drivers by physicians of the Sandusky county health department.

The check-up was attended not only by the drivers, but also by members of the school boards from the respective districts. There was the freest comparison of the physical condition of the busses and exchanges of ideas by drivers and local school-district officials. Both the drivers and the members of district boards saw the new large and modern transportation busses of the recently equipped districts. In fact, this opportunity for examining the newer busses has led to the replacement of a number of conveyances which were not quite satisfactory. Vans which have been overcrowded have been replaced by more commodious and comfortable conveyances. This fact is not so satisfying as is the more important fact that the changes were made without pressure or legal requirement, but when the school officials saw what was being done by other districts they set afoot activities to make their own home busses of the best type for service to the boys and girls of the home districts.

The Transportation Situation

Sandusky county, including the city of Fremont, has nine centralized school districts. These are all represented by the respective fleets in the accompanying illustration. Two districts, Gibsonburg and Helena, do not operate their own fleets, but have given three-year contracts for transportation to Mr. Clarence Paul of the Gibsonburg Garage. Standard equipment is stipulated in the contracts and high-grade busses are operated. Each of the other school districts owns its own vans. In these districts one of the drivers who is a good mechanic is designed as the chief driver and is held responsible for a daily check-up of the physical condition of each bus. With two exceptions the centralized districts each maintain a shop where local repairs may be made and a garage where the busses may be permanently quartered.

The Ohio state law requires that bus drivers hold a license issued by the respective county boards of education stating that the holder is in each case of lawful age and properly qualified to drive a school bus. The driver must be at least 18 years of age, must hold a chauffeur's license, and must be under bond with the local school board. He must be vouched for by the local school clerk and the local superintendent of schools before a certificate can be issued to him by the county board of education.

The state laws further require that all busses used for transporting children to and from school bear a sign "School Bus" visible for a reasonable distance by approaching machines. The law further requires that all traffic must come to a stop 20 ft. from any van which is receiving or unloading children. Local regulations usually also require that school busses come to a stop before passing a grade railroad crossing.

The attitude of the law-enforcement officials concerning the various traffic laws relating to school busses has been excellent. In Sandusky county the sheriff and his deputies have materially assisted in the observance especially of the laws relating to the stopping of traffic.

A FEW OF THE BUS DRIVERS AND SCHOOL-BOARD MEMBERS WHO ATTENDED

SCHOOL BUSSES OF SANDUSKY COUNTY, OHIO, DRAWN UP FOR THE ANNUAL CHECK-UP

Local County Requirements

The Sandusky county board of education has adopted a series of special rules for insuring satisfactory service to the pupils and the schools and for safeguarding children against accident. These rules are an integral part of the contracts between the county board of education, the district board of education, and the drivers. The details of these rules will be readily seen in the accompanying copy of the contract and bond. In order to make the rules absolutely clear to the drivers and also in order to systematize the routes the local superintendents of schools ride with each van driver at least once during the school year or during the week preceding the September opening of schools. During this trip the superintendent and the driver formulate a definite time schedule for the entire route so that each child and each parent may know exactly when the bus will stop in the morning and at what time in the evening the return of the child may be expected. Following the trip the route map indicating the location of each home, the number of children to be transported from each home, and a time schedule are worked out and kept in the hands of the superintendent and of the driver.

During the school year 1930–31 the respective consolidated districts are making a study of the entire cost of transportation. This study includes the gas consumption, cost of wear and tear on the trucks, and is to be expressed in terms of per-capita pupil cost. In addition to this study better methods of keeping the busses in satisfactory condition and of making them

(Concluded on Page 138)

Common Sense in Employing the Teacher

H. H. Kirk, Superintendent of Schools, Faribault, Minnesota

The writer well remembers the occasion of his first important meeting as superintendent with a board of education. In February, 1917, an unexpected vacancy in a village of some 600 souls offered the opportunity of becoming the head of a school employing eleven teachers. Before many weeks had elapsed, the problem of reëlecting the teaching force and of filling vacancies asserted itself, and the writer had the first experience in dealing with a board of education in this important connection.

The usual method of employing teachers by the use of application blanks and inquiry forms was familiar to the writer, and he proceeded just as the superintendent had proceeded in his former location. By the time set for the board meeting he felt that he had a sound basis for recommending a suitable candidate for every vacancy. In arriving at these recommendations many applications had been considered and investigated. A careful effort had been made to weed out the incompetents and to recommend only the best.

His surprise, therefore, may be readily imagined when, on the day appointed, the clerk of the school district, a rising young attorney of the village, appeared at the meeting with fully as many applications in his brief case as had been received during the entire time by the superintendent. There was this difference, however, that the material in the clerk's hands consisted of all the original letters of the applicants, with perhaps a photograph and some open recommendations attached, whereas the superintendent had in his possession only one set of papers for each vacant position, each set including the confidential opinions regarding the applicant's fitness.

When Temerity Won

The board proceeded to elect teachers. Whether it was the photograph or the applicant's penmanship that was the deciding factor, the writer does not know. Nevertheless, before many minutes elapsed, one application was sorted out from the two stacks, and a motion was made that she be elected teacher of the first grade. Probably it was an example of "fools rushing in where angels fear to tread" or something else, but the superintendent, who had now recovered, began to talk. A few pointed questions succeeded in startling the board into a condition of thoughtfulness. Before many minutes elapsed the members admitted that they were following a practice in the employment of teachers that none of them would think of in private affairs. The "miller" member admitted that he would not employ an engineer for his mill upon such flimsy evidence; the "real estate" member acknowledged that he would certainly never buy a piece of property without further investigation; and the "farmer" member was frank when he stated that he would not buy even an implement for his farm without telephoning to some neighbor who owned a similar implement. As the writer looks back upon his experience he wonders why the board did not revoke his contract as a reward for the unheard-of nerve that he displayed. The pleasing result, however, was that from that time on no teacher was considered for a place in the school until the superintendent had investigated her case and was willing to make a recommendation in her favor.

It is possible that such a situation may be repeated in some town, even though it is unthinkable. For that reason, the writer is submitting a description of the routine followed in his office for arriving at a sound basis for recommending candidates for teaching vacancies.

How Faribault Selects Teachers

Faribault is a city of approximately 12,000 population. There are 68 teachers in the city schools. The method of selecting teachers is not so complicated that it cannot be used in the typical village or consolidated school.

FARIBAULT PUBLIC SCHOOLS
FARIBAULT, MINNESOTA

TEACHER'S APPLICATION BLANK

Name ..... Date of Application .....
Position Desired: 1st Choice ..... 2nd Choice .....
Present Address (till when) ..... Home Address ..... Tel. .....
Certification Held ..... Date of Expiration ..... No. of years of experience .....
Age ..... Height ..... Weight ..... Health ..... Last Salary .....

EDUCATIONAL AND PROFESSIONAL TRAINING

INSTITUTION	DATE	COURSE & DEGREE	REFERENCES

EXPERIENCE

PLACE	DATE	DEPARTMENT	NAME & ADDRESS OF SUPT.

REFERENCES

NAME	ADDRESS	POSITION

UNDERSCORE the school activities which you can do well. State below on the back of this sheet your training or experience in each:

Junior-Senior High School: Monitor duty in study hall; literary societies; debate; declamatory work; plays; class adviser; athletics; band, orchestra, glee clubs; H.S. paper; annual; home room groups.

Grades: Can you teach well, under supervision, the following: Music? ..... Art? .....
Penmanship? ..... Playground Work? ..... Physical Training? ..... Do You Sing? .....
Play the Piano? .....

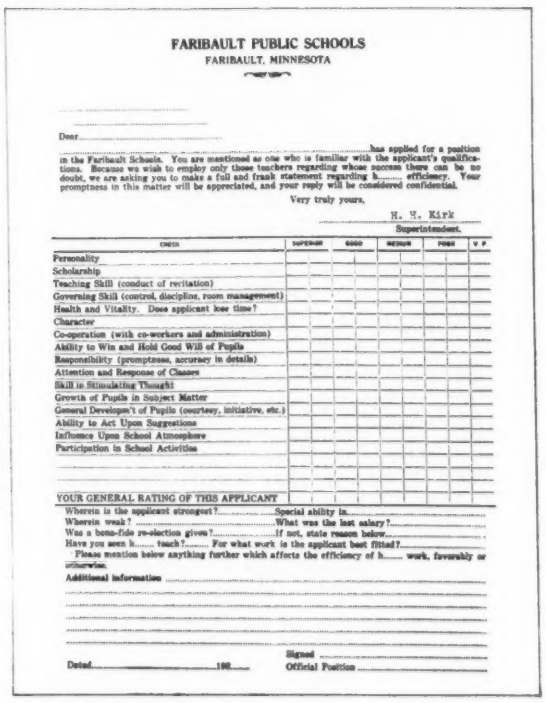
List below the subjects which you can teach in the order of your preference and efficiency. Indicate after each, the courses and the credit hours or normal or college preparation.

List also the educational courses in methods, psychology, teacher's courses, supervision, practice teaching, tests and measurements, etc., that you have taken.

We should like to have a letter from you setting forth what you think necessary for us to know about you in considering your application. Return this blank and enclose a recent photograph with a stamp and with your name and address on it. Can you make a personal application? ..... When? .....
Please accept our thanks for your courtesy and promptness in this matter.
Very truly yours,
H. H. KIRK
Superintendent.

FIG. 1. THE APPLICATION BLANK

Beginning with the first of the calendar year, applications make their appearance in the superintendent's office. Even before it is known what vacancies will occur, there are several hundred applications on file for various positions, and by the end of the school year it is not unusual to have a thousand applications in the file. Surprising as the statement may seem, the applications are not read as they come in. The superintendent's secretary merely underscores the words which describe the position sought and promptly forwards an application blank to the person applying. When the application blank is returned, it is examined with several objects in view. The blank makes clear at a glance the important details of the applicant's record. Many applications are discarded at this point; some because of the poor standing of the applicant's college; others because the persons given as references do not inspire confidence; others because the applicants have pursued no course to fit themselves for the position applied for. Others fail at this point because of the lack of proper certificate; others again because of insufficient courses in educational subjects. Up to this point the original letter of application has scarcely received a glance.



FARIBAULT PUBLIC SCHOOLS
FARIBAULT, MINNESOTA

Dear .....
..... has applied for a position in the Faribault Schools. You are mentioned as one who is familiar with the applicant's qualifications. Because we wish to employ only those teachers regarding whose success there can be no doubt, we are asking you to make a full and frank statement regarding h..... efficiency. Your promptness in this matter will be appreciated, and your reply will be considered confidential.
Very truly yours,
H. H. Kirk
Superintendent.

CHECK	SUPERIOR	GOOD	MEDIUM	POOR	V. P.
Personality					
Scholarship					
Teaching Skill (conduct of recitation)					
Governing Skill (control, discipline, room management)					
Health and Vitality. Does applicant lose time?					
Character					
Co-operation (with co-workers and administration)					
Ability to Win and Hold Good Will of Pupils					
Responsibility (promptness, accuracy in details)					
Attention and Response of Classes					
Skill in Stimulating Thought					
Growth of Pupils in Subject Matter					
General Developm't of Pupils (courtesy, initiative, etc.)					
Ability to Act Upon Suggestions					
Influence Upon School Atmosphere					
Participation in School Activities					
YOUR GENERAL RATING OF THIS APPLICANT					

Wherein is the applicant strongest? ..... Special ability in .....
Wherein weak? ..... What was the last salary? .....
Was a bona-fide re-election given? ..... If not, state reason below .....
Have you seen h..... teach? ..... For what work is the applicant best fitted? .....
Please mention below anything further which affects the efficiency of h..... work, favorably or otherwise.
Additional information .....
Signed .....
Dated ..... 192.... Official Position .....

FIG. 2. CONFIDENTIAL RATING BLANK

Getting Independent Recommendations

The next step consists in sending out inquiry blanks to the references given by those whose applications have not been discarded. Occasionally, other references are consulted in addition to those named by the applicant. These reference blanks are returned, and as they appear each one is marked by the superintendent, with the letter A, B, C, or D, according as the blank is satisfactory. Still the original letter of application is not read: With a thousand applications, it would be a waste to read an application until there is a good reason for so doing.

The blanks are next filled with the applications, and the ratings are entered in an index which contains the names of all persons who have applied for positions. In this index which is merely a well-bound composition book, the applicants for each type of vacancy are listed together. Every entry includes the applicant's address, the number of years' experience, and the ratings given in the returns of the inquiries. To illustrate: An entry for a first grade may read as follows:

Mary Jones *Janesville, Montana*
2 yrs. experience ABAA

This means that Mary Jones has been recommended very highly by four different persons.

When Applications Are Read

At this point there is sufficient evidence to warrant the reading of certain applications. The superintendent selects from the index the relatively small number of applications which show evidence of superior ratings. The original letters are studied for the purpose of learning as much as possible regarding the teacher's general culture as is evidenced by her spelling and composition. The blank is searched thoroughly for flaws in the teacher's record, that would make her an unsatisfactory person. The inquiry blanks are reread thoroughly so that no statements of a favorable derogatory nature have been overlooked. Some applications, of course, cannot undergo this scrutiny and are discarded even at this point.

From a total of forty or fifty applications for a position, only four or five remain for final consideration. If the distance is not too great, the superintendent arranges to visit, if possible, these teachers in their classrooms. This is done wherever at all practicable, but occasionally an interview outside of school hours must be arranged for. If the superintendent is so fortunate as to see the teacher at work, he has an additional means of understanding her case, which is extremely valuable. If an inspection of classroom work is impossible, an interview must be substituted. The personal interview is regarded as so important in the Faribault schools that the board of education has given assent to the proposition that if necessary as much as $50 may be spent for every position to be filled, for the superintendent to meet the prospective teacher before she is employed.

The Interview

The personal interview is conducted with three outcomes in mind: First, it is desirable to

(Continued on Page 127)

Safeguarding School Board Deposits—II

H. H. Linn, Assistant Superintendent of Schools, Muskegon, Michigan

(Concluded from April)

Should Depositories be Required to Furnish Security?

There are some individuals who are opposed to the policy of requiring the banks to furnish security for public deposits. They argue that the public funds should be given no more consideration than the funds of the private depositors. Some argue against the use of collateral as security, stating that in the event of failure there will be fewer assets to distribute among the general depositors, and that the public at large would be better able to stand a loss than the individual depositors. Most of these arguments are presented by individuals connected with the banking institutions. It may be inferred that the bankers prefer to handle the public deposits without being required to furnish security.

The weight of opinion, however, supports the contention that the moneys raised for public purposes must be protected against loss or diversion from the purposes for which they are intended. These funds are the property of the citizens. They are administered by public boards and individuals who are usually elected to their positions by popular vote. This means that occasionally public officials are elected who lack the experience or training needed to administer the public funds most judiciously. At other times, unfortunately, men are elected to public office who would betray the public interests to promote selfish personal ends. There have been too many public scandals involving the handling of public deposits to warrant the elimination of security for public deposits.

In recent years with the great number of bank failures occurring throughout the country, the various state legislatures have been giving considerable attention to this problem of protecting public deposits. A study of legislative acts during the past few years shows a distinctive trend toward strengthening the provisions for protecting the deposits. There appears to be no question in the minds of the majority of the legislators regarding the need for security.

It may be argued that the simplest way to protect the deposits would be to declare the public a preferred creditor in the event of bank failure, thus eliminating the trouble of handling collateral or the expense of buying depository bonds. This suggestion, if carried out, might lead to a dangerous situation. It might happen that all the assets of an insolvent bank would not be sufficient to pay off the claim of the public. Again, the blanket right of preference for all public deposits might make the public officials careless about the selection of depositories, and could easily lead to many questionable acts on the part of the public officials. When security is required of the banks, the weaker institutions are usually unable to provide depository bonds and cannot put up a great amount of collateral as security. This means that the amount of public deposits they can carry will be limited. The requirement that security of some kind must be provided thus acts as a stabilizer in controlling the amount of public deposits to be placed in a bank according to its relative strength and safety.

If the general practice over the country means anything, it may be concluded that the weight of opinion favors the policy of requiring security for the deposits. The Federal Government requires such security for all its deposits. So do 39 of the states and practically all city governments. There is no good reason why the school funds in all the states should not be protected likewise.

Public Officials May be Liable on Their Bonds for Losses Due to Bank Failures

In some states the public officials who have the custody of the public funds — usually the treasurers — may be liable on their official bonds for losses due to bank failures. Most official bonds are written "for faithful performance of duties," and some courts have ruled that this faithful performance implies that the officials must select the depositories so wisely that public funds will not be placed on deposit with weak banks that are likely to fail.

In most of the states, however, the public officials are exempt from liability on their bonds for loss due to bank failures. This is true especially in those states that have laws requiring the banks to furnish security for the public deposits. In a very few instances, the public officials are exempt from liability even if no security is required of the banks, provided that certain other legal restrictions are complied with. For example, the law may require that the depositories be selected by a board of officials and that the treasurer is required to keep the public funds in these institutions. If one of these depositories fails, the treasurer may be exempt on the grounds that he had not failed in the performance of his duties since he had not selected the depositories. However, if he deposits the public funds in a depository that has not been designated strictly according to law, and this depository fails, he may then be held liable for any losses of public funds sustained in the failure as he has not performed his duties faithfully.

Also, if the law prescribes that the treasurer is not to deposit public funds in excess of the amount of security provided by the bank for these deposits, the treasurer may be liable for any losses that exceed the amount of security.

In general, the public officials and their sureties will not be exempt from liability for losses of public deposits due to bank failures if they fail to observe the statutes that control the selection of depositories or the protection of the deposits.

Liability on the official's bond cannot be considered adequate protection for the public funds placed in the banks. In many instances the official has given a personal bond. Personal bonds are little better than worthless. Even though the official is bonded by a corporate surety company, the amount of his bond may be much less than the amount of the deposits kept in the bank. In this event there may be inadequate protection for the deposits if a bank should fail.

On the basis of opinion submitted by state attorneys general and state superintendents of education the writer understands that in the following states local public officials are liable on their bonds for losses of local public-school funds due to bank failure: Alabama, Connecticut, Georgia, Illinois, Kansas, Kentucky, Maine, Maryland, Massachusetts, Nebraska, New Hampshire, New York, Oklahoma, Oregon, South Carolina, Vermont, Virginia, and Wisconsin.

Guaranteeing Bank Deposits

Many plans have been suggested and schemes proposed to protect depositors against loss in the event of bank failure. One of the favorite schemes advocated to achieve this end is the so-called "guaranty fund." According to this particular plan, the banks are to form a sort of mutual insurance organization and agree to guaranty to pay all the claims of depositors in insolvent banks out of a general fund raised by assessments on all member banks. This plan has been suggested for all the National banks in the country at several sessions of Congress, but our lawmakers at Washington have never seen fit to approve it. A number of state legislatures have considered it for state banks on a state-wide basis, and since 1907, a total of 8 states have adopted some modification of the "guaranty fund" plan: Oklahoma (1907), Kansas (1909), Nebraska (1909), Texas (1909), Mississippi (1914), South Dakota (1915), North Dakota, (1917), and Washington (1917).

In the states in which the "guaranty fund" scheme has been attempted National banks have been forbidden to belong to the organization effected to protect the depositors. Therefore, only the banks organized under the state laws have been members. In some of the states — Mississippi, Nebraska, North Dakota, Oklahoma, and South Dakota — all state banks were required by law to join their respective "state guaranty fund" organization. In Texas, the state banks were given their choice of two plans; (1) the guaranty fund, and (2) a bond security plan. In Kansas and Washington, it was optional with the state banks whether or not they wished to join with the "guaranty fund" group. Detailed statutory provisions were made in each of the eight states to regulate the functioning of the guaranty plan.

It is unnecessary for the purpose of this article to go into detail regarding the functioning of these so-called "state guaranty funds" in the eight states. It will suffice to state that this plan has been a failure in every state that has tried is. As long as general economic conditions in this country were prosperous with few bank failures, it appeared to work wonderfully. However, as soon as this country struck a period of depression following the close of the world war, the number of bank failures increased and the "guaranty funds" were called upon to protect the depositors against huge losses. The situation became so bad that it was out of the question for the solvent banks belonging to the organization to make good the losses in the insolvent banks.

The Oklahoma bank guaranty law was repealed in 1923, and the Texas law in 1927. By 1922, all the member banks had withdrawn from the organization in Washington. This was also true in Kansas. The situation is so bad in Nebraska that the bankers have attempted to get the courts to declare the plan unconstitutional. The plan has failed in both the Dakotas. According to the audit report of the Depositors' Guaranty Fund of North Dakota, dated December 27, 1926, it would require over 90 years to pay off the liabilities of the guaranty fund on the basis of the net income to the fund at that time.[12] In Mississippi it is proposed that $5,000,000 in state bonds be issued to take up outstanding guaranty deposit certificates issued to customers of closed state banks that otherwise may not be redeemed for 15 or 20 years.

The "guaranty fund" plan for protecting bank depositors may be considered a failure, as far as a state-wide plan is concerned. Such a general plan for all banks throughout the United States might succeed, but it is quite unlikely that any other state will support such a scheme for state banks only, in view of the unsatisfactory results in the eight states that have already attempted it.

The Iowa State Sinking Fund for Public Deposits

The "guaranty fund" plan just discussed was intended to safeguard all deposits, those of pri-

[12] *Journal of the House*, North Dakota, January 27, 1927, p. 17.

vate individuals and corporations as well as public institutions.

Iowa has adopted a different plan for the protection of public deposits only, namely, a "State Sinking Fund for Public Deposits." This plan is also based on the principal of mutual insurance placed on a compulsory basis. The chief provisions of this plan are substantially as follows:[13]

1. A state sinking fund for public deposits is created in the office of the state treasurer.

2. The purpose of this fund is to secure the payment of deposits to state, county, township, municipal, and school corporations when deposited according to law.

3. If a bank carrying public deposits becomes insolvent, these deposits are paid from the state sinking fund.

4. The state sinking fund is built up by diverting the interest earned on all public deposits, up to 2½ per cent, into the state fund until the public deposits in the insolvent banks are paid. This sinking fund also receives the receipts from the collection of claims assigned or paid, since it is subrogated to all the rights of the public corporations whose claims are paid when a bank becomes insolvent.

5. If the sinking fund is depleted, and $50,000 or more claims are made on the sinking fund, the state treasurer may issue anticipatory warrants not exceeding $3,500,000 at any one time, bearing not more than 5 per cent interest. These warrants will be paid from future accumulations in the sinking fund.

6. Interest will be diverted from the public deposits only when necessary to meet the public claims in insolvent banks.

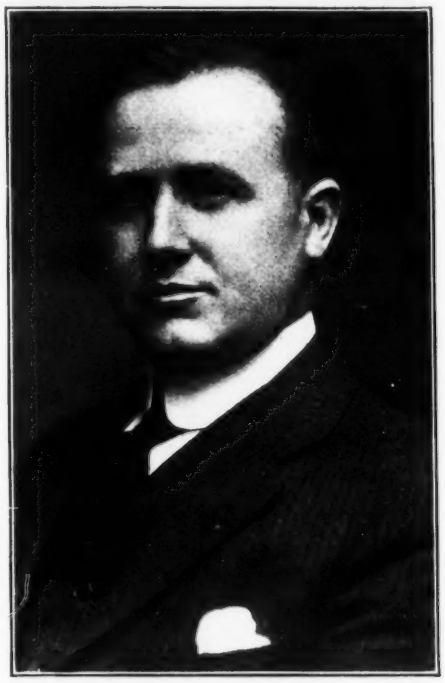
The law creating the Iowa State Sinking Fund for Public Deposits was put into effect in April, 1925. The first loss to the sinking fund occurred in July, 1925. The latest report on this fund, dated January 2, 1931, issued by R. E. Johnson, treasurer of state, shows how this fund has functioned between August 1, 1925, and December 31, 1930. According to this report a total of 2,178 claims have been paid as follows:

	No. of Claims	*Amount*
School	1,128	$ 4,274,472.99
County	386	7,778,146.11
Township	406	683,852.41
City or town	256	1,940,463.60
State	2	463,500.00
	2,178	$15,140,435.11

The report also shows that the sinking fund during this period received diverted interest amounting to $8,348,891.16, and dividends amounting to $6,263,199.01. The dividends received to date from closed banks amount to 41.36 per cent of claims paid. Anticipatory warrants amounting to $12,600,000 have been sold, and the sum of $10,800,000 paid to redeem these warrants. At the present time warrants amounting to $1,800,000 remain to be redeemed. From April 20, 1925 to January 2, 1931, 402 banks in Iowa have suspended operations. Of this number, 125 receiverships have been closed. The dividends paid in the final liquidation of these banks ranged from 4.35 per cent up to 100 per cent plus interest.

It is rather difficult at this time to say whether the Iowa plan has been a success or a failure. One thing is certain, and that is that the public deposits have been paid in full. There are anticipatory warrants that are still outstanding, however, and these must be paid before the slate is cleaned. The public has also been paying a stiff premium for this insurance as 2½ per cent interest annually has gone into the sinking fund for a period of more than 5 years. The premiums on depository bonds issued by surety companies would have been much less than this, had it been possible to secure depository bonds. According to R. E. Johnson, treasurer of state, "the law creating the 'State Sinking Fund for Public Deposits' was enacted for the reason that but few banks in this state could have at that time procured sufficient corporate depository bonds to cover public funds on deposits."

[13]For complete statutory provisions see *Code of Iowa*, 1927, pp. 183–85, Chap. 55 A1.



HARRY H. CLARK
Superintendent of Schools,
Knoxville, Tennessee

Mr. Clark, who was recently elected superintendent of schools at Knoxville, Tenn., is a native of that state. He was graduated from Winchester Normal School, and holds degrees given by Yale University and Peabody College. From 1907 to 1909 he was professor of pedagogy in the Winchester Normal School. In 1909, he went to Somerville as superintendent of schools. After two years there, he became professor of pedagogy in the Murfreesboro Normal School. In 1912, he was made professor of secondary education at the University of Tennessee, where he remained until 1921. He was head of the education department at Furman University from 1925 to 1930, and also served as dean at the University Summer School. In 1930 he became president of Judson College, at Marion, Ala., from which he resigned to accept his present appointment.

While it is true that 2½ per cent annually is a high premium to pay for this type of mutual insurance, in all probability this rate will be much lower over a longer period of years. Iowa has had more bank failures since 1920, than any other state in the Union. Banking conditions in this state can scarcely be as bad in the future as they have been during the past decade. It is safe to predict that in 1950, if this plan is still in existence, an analysis of figures will show the average rate of interest diverted to the sinking fund from 1925 to 1950, to be much less than the 2½ per cent shown during the past 5 years.

The Iowa plan has one serious weakness: The various public boards selecting the depositories have too much freedom, and the banks may be selected without due diligence. A weak bank may be selected for political reasons. When a bank is required to furnish a corporate depository bond, only the relatively safe risks will be approved by the surety companies. If the bank must furnish collateral as security, the amount of deposits it can carry will depend on the amount of collateral it can furnish. In this event a weak bank is not likely to carry a large amount of public deposits. With the Iowa plan, too much opportunity is given the weak banks to carry excessive amounts of public deposits. If restrictions are made to prevent excessive deposits in any one bank, and if definite criteria are set up by which only the stronger banks are selected as depositories for public funds, the present weakness will be remedied to some extent and the general plan will have far more merit. The basic plan certainly merits the serious consideration of legislatures in other states.

Public Deposits May be Given a Preference

In some political divisions, primarily states, public deposits have been given preferred rights when insolvent banks have been liquidated. In some cases this preference has been determined by statute and in other cases by the courts. This right of preference is based upon two theories: (1) the prerogative right of the sovereign, and (2) the theory of trust. According to the *American Law Reports*,[14]

"1. The first, the common-law prerogative, is a remnant of the monarchial form of government, under which the Crown arrogated to itself the right of first payment of its claims out of estates of insolvent debtors. The existence of this right in republican governments as established in this country has been denied by the courts of several states, while others maintain that it is an attribute of sovereignty and not inconsistent with the principles of free government, and, therefore, a part of the common law as adopted by the people.

"2. The second theory, that of trust, is based upon the premise that public money is the property of the state, and its deposit by a public officer in a bank which thereafter becomes insolvent does not divest the title of the state, and the appropriation of such money to uses for which it was not intended cannot be allowed to prejudice the interests of the people. There are numerous authorities which take this view in cases where the deposit of the funds was unauthorized or unlawful, but where the deposit in the manner made was not expressly prohibited, the courts are inclined to take a contrary view."

In a few states, the first theory, the prerogative right of preference, has been accepted and state deposits given the right of preference when insolvent banks have been liquidated. In most instances, however, the prerogative right has been given the state only, and not the county or other political subdivisions. Therefore, *local* public deposits, in the main, are not protected against loss in the event of bank failure by being given a preference. In both Iowa and Georgia, in which local public funds had formerly been given the prerogative right of preference in case of bank failure, recent legislatures have enacted laws to eliminate this preference.

The prerogative right of preference does not apply to National banks as the National Banking Act makes no distinction between different classes of deposits,[15] and state legislation can give no priority in the assets of an insolvent National bank.[16]

Summary

1. The four chief means by which public deposits may be protected against loss in the event of bank failure are: (*a*) The banks may be required to furnish security for the deposits. (*b*) The public officials who have the custody of these funds may be liable on their official bonds for losses due to bank failure. (*c*) Some form of "guaranty fund" may be set up to protect the deposits. (*d*) The public deposits may be given a preference when an insolvent bank is liquidated.

2. The most common provision for the protection of public deposits requires the banks to furnish security for these deposits. Personal bonds are practically worthless as security and should not be accepted. Depository bonds written by surety companies are very desirable security when written by strong reliable companies subject to local state supervision. High grade collateral, such as federal, state, county, and municipal bonds, is a satisfactory form of security. The market value of the collateral furnished as security should never be less than the amount of deposits.

3. In a number of states the public officials—usually treasurers — are liable on their official bonds for losses due to bank failure on the grounds that they have failed to "faithfully perform the duties of their office" in depositing public funds in a weak bank. This is a very un-

[14]*51 American Law Reports*, p. 1337.
[15]First National Bank v. Colby, 21 Wall (U. S.) 609.
[16]Davis v. Elmira Savings Bank, 161 U. S. 275.

(Concluded on Page 128)

VOCATIONAL BUILDING, NORMANDY HIGH SCHOOL, NORMANDY, MISSOURI
Wm. B. Ittner, F.A.I.A., Architect, St. Louis, Missouri

The Normandy High School

Mrs. Mary Holbrook

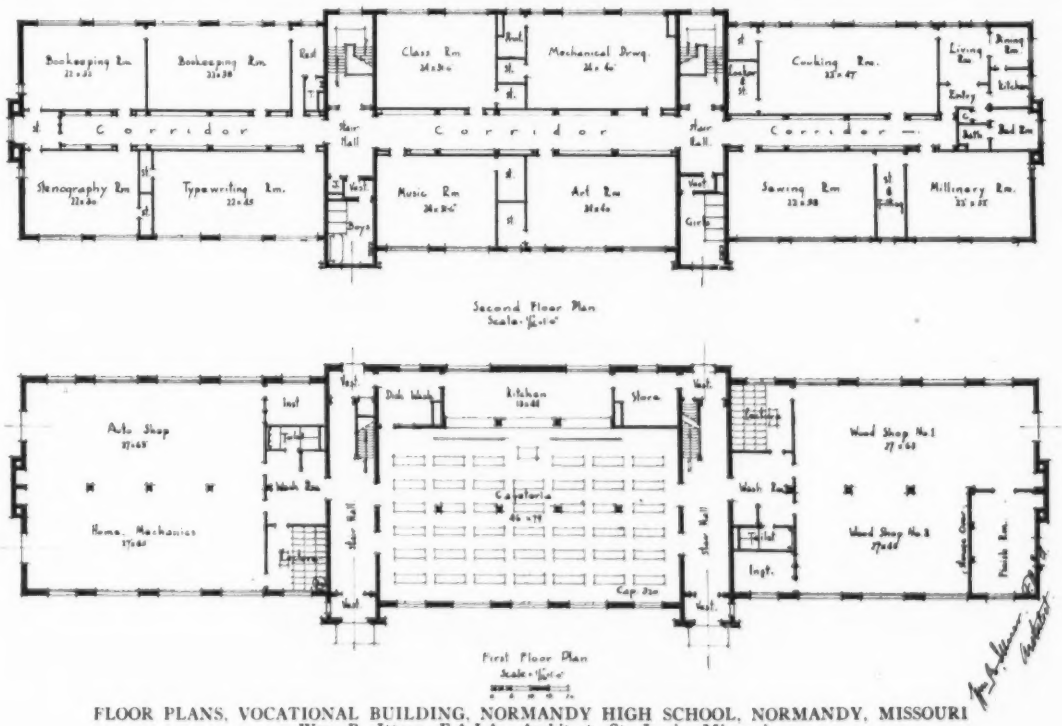
The importance of an adequate site to care for future growth of the school population, and to meet the demands of changing methods of education, and the advantage of possessing such a site, are well demonstrated in the case of the Normandy High School, a 6-year high school of the Normandy Consolidated District, located just outside of the city limits of St. Louis, on a 24-acre tract of land.

The possession of this site was a strong factor in the development within a brief period of time, of a high-school plant, destined to rank with the best in the country. Six years ago, this district, which embraces 10 square miles of territory and 32,000 population at the very brink of the city, had no high school and had not owned one for 14 years. Although located between several prosperous suburban cities, the community had no incorporated territory within its bounds, a fact which has made its school funds largely a matter of public vote. For years, the voting populace refused funds to erect a high-school building, but finally approved the purchase, at a low cost, of this large acreage with an antiquated school structure, which had been vacated by a private seminary.

The board of education and the superintendent, Mr. Fred B. Miller, were not influenced in their ideas, plans, and policies by this secondhand exterior, and proceeded to redecorate the building and to engage the best faculty available, fully conscious of the possibilities in the possession of such an ideal site.

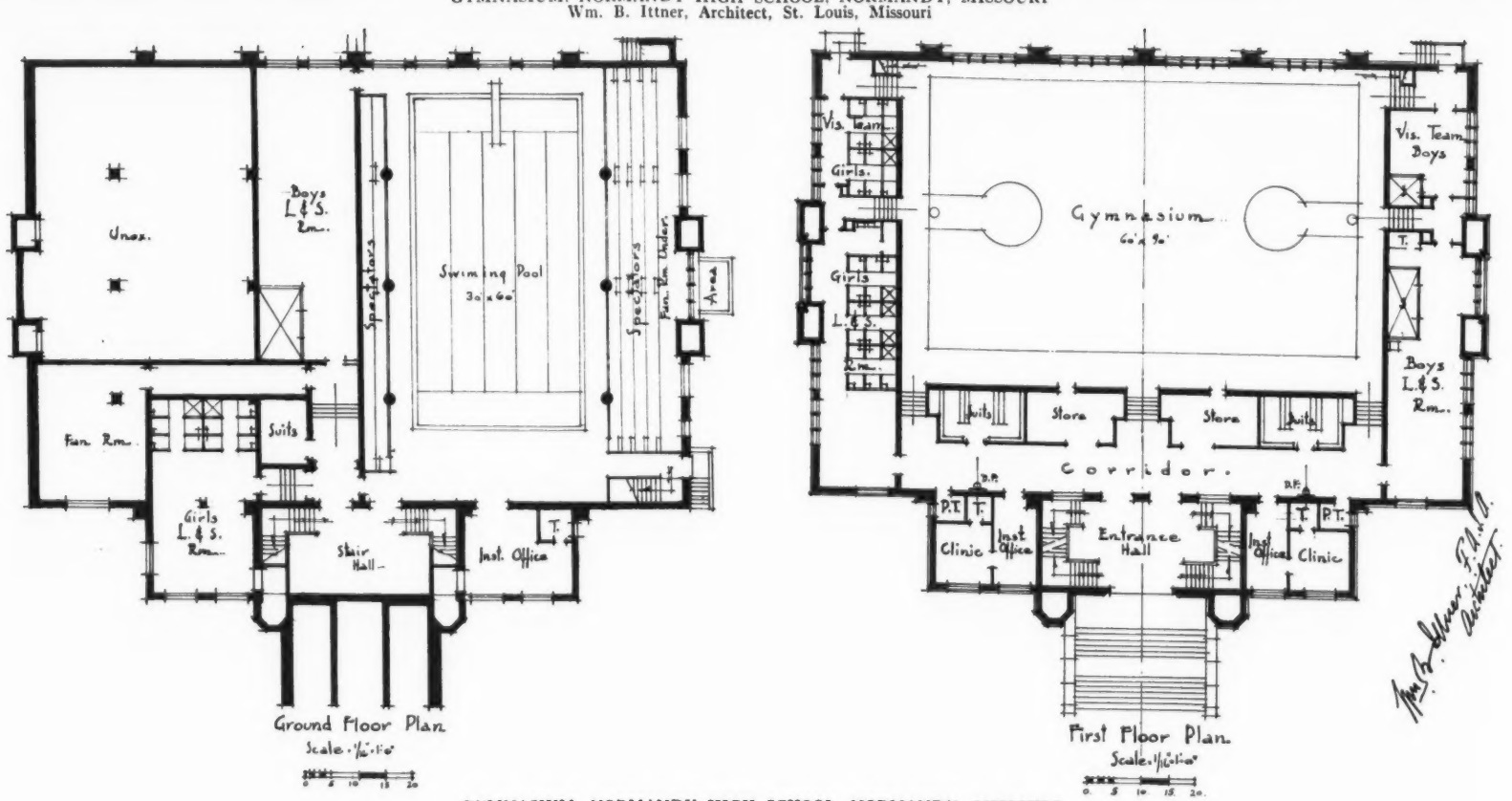
With the utilization of the site, the board has worked consistently and tirelessly to win the confidence of the public in order to obtain funds for the erection of further new buildings. The existence of a high school in the community has given an incentive for the expansion of residence property in this district. Consequently, a number of large real estate developments have taken place within the district, which has increased the school population and the assessed property valuation. These promotions have come simultaneously with the activities of the board of education, making a larger school plant imperative.

In the spring of 1928, after an educational campaign, a $342,000 bond issue was voted for building purposes. The bonds were sold for $350,027. Part of the amount was used for a grade-school building, and part for additions to three grade schools. The remainder has been used to complete two units of a group plan of buildings on the high-



FLOOR PLANS, VOCATIONAL BUILDING, NORMANDY HIGH SCHOOL, NORMANDY, MISSOURI
Wm. B. Ittner, F.A.I.A., Architect, St. Louis, Missouri

GYMNASIUM, NORMANDY HIGH SCHOOL, NORMANDY, MISSOURI
Wm. B. Ittner, Architect, St. Louis, Missouri



GYMNASIUM, NORMANDY HIGH SCHOOL, NORMANDY, MISSOURI
Wm. B. Ittner, Architect, St. Louis, Missouri

school site, comprising a vocational building and a gymnasium.

The new buildings were designed by Mr. William B. Ittner, of St. Louis, who was architect for the St. Louis board of education for 19 years, and during the past decade has served 105 cities and towns as school architect.

Normandy is progressive in being able to employ the group plan. This plan, which is the recommended plan for high schools where space permits, avoids cumbersome and unsafe use of elevators and the tedious climbing of stairs by students. It permits a domestic atmosphere and exposes few students to the hazards of power lines necessary in vocational work. Maintenance is more economical, since it is not necessary to heat, light, and furnish janitorial service to enormous buildings, where only one part is in use. Also noisy work classes may be removed from the quieter academic subjects.

The two buildings just completed on the Normandy campus are in the English collegiate style of architecture, carried out in red brick, with black brick laid in a pattern on the façades. The roof is unfading variegated green and purple slate, with a predominance of green.

The vocational building has ample facilities for reproducing the working environment. There is a cafeteria with kitchen for the convenience of teachers and students. On the second floor are located

(Concluded on Page 130)

CENTER SCHOOL, LONGMEADOW, MASSACHUSETTS
Malcolm B. Harding, Architect, Westfield, Massachusetts

Center Elementary School, Longmeadow, Mass.

The Center School at Longmeadow, Mass., is located in a typical New England town, whose long history is reflected in its delightful old homes and churches and its beautifully shaded "Common." The Center School has been carefully designed to harmonize with the Colonial architecture of the town and to become a part of the community "picture."

The school is located on the east side of the "Common" and is a combination one- and two-story building designed in the best local tradition. The structure, as erected, contains the practical advantages of simple administration, flexibility of organization, elimination of fire hazard, and economy of construction.

The arrangement of the building is especially interesting because it involves a maximum economy of floor space for an elementary school. Of necessity the plan is of the closed type and the building cannot readily be enlarged. The entire expense of corridor construction is, however, eliminated because the side aisles of the auditorium provide this otherwise expensive feature.

The building is constructed of red brick, trimmed with light stone, and the roof is of slate, with copper flashings. The side walls and ceilings are of metal lath and cement, with plaster finish, except in the stair halls and auditorium, which are finished in brown ash. The classroom floors are of maple covered with rubber tile, and the corridors are covered with linoleum.

The building contains no basement except for a small space at the rear. The auditorium is well lighted from clere story windows.

In addition to twelve classrooms, the building contains an auditorium, a library, a dental suite, a special room, a kindergarten, a teachers' room, a stockroom, and an office for the principal. The kindergarten which is in the one-story section has a separate entrance opening on to the playground. A natural slope of the lot level has been utilized in locating the playrooms and lunchrooms in the basement at the rear. There is also space for the boiler room and janitor's room.

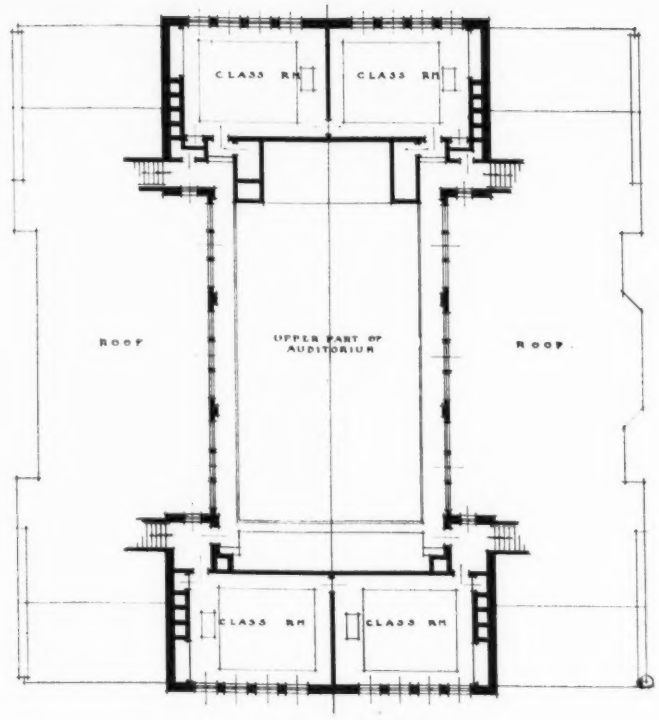
The combined auditorium-gymnasium on the first floor is provided with a fine stage for theatricals and school entertainments.

The building is heated with low-pressure steam, and fresh air is provided by means of univents. The electrical system is complete, and comprises an electric-lighting system, a fire-alarm system, and an electric program-clock system.

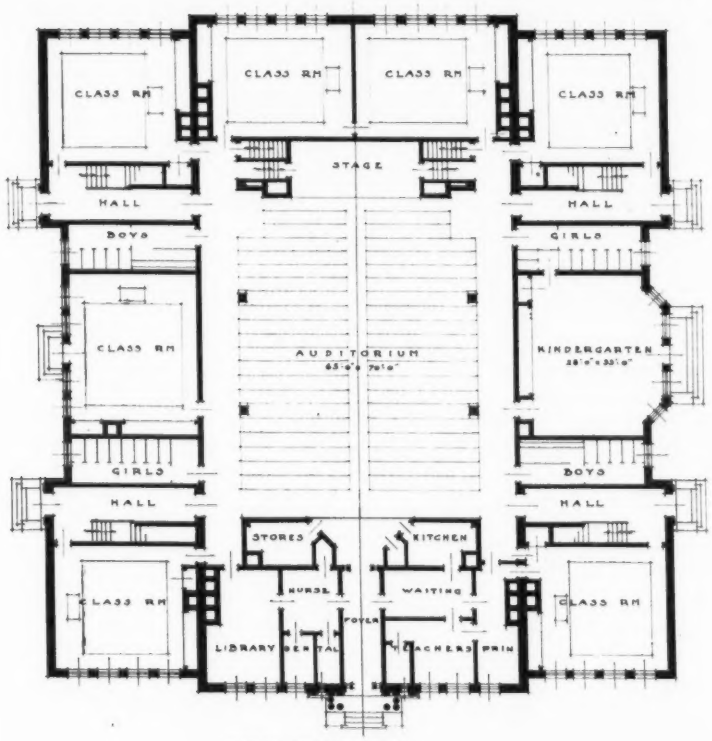
The building was erected under the supervision of Malcolm B. Harding, architect, of Westfield, Mass., and cost a total of $125,000, including architects' fees, and grading, or $260 per pupil.

KINDERGARTEN, CENTER SCHOOL, LONGMEADOW, MASSACHUSETTS
Malcolm B. Harding, Architect, Westfield, Massachusetts

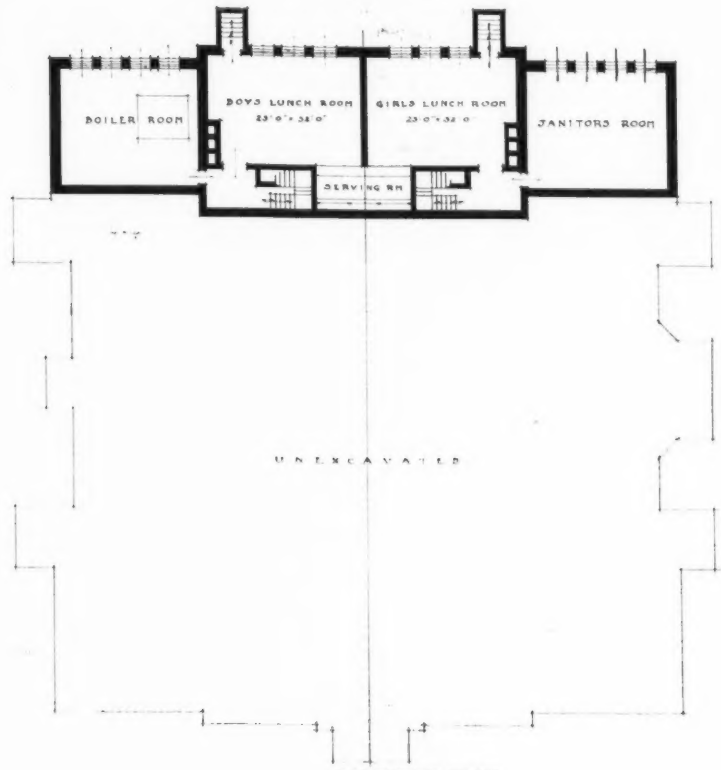
FIRST-GRADE CLASSROOM



SECOND FLOOR PLAN

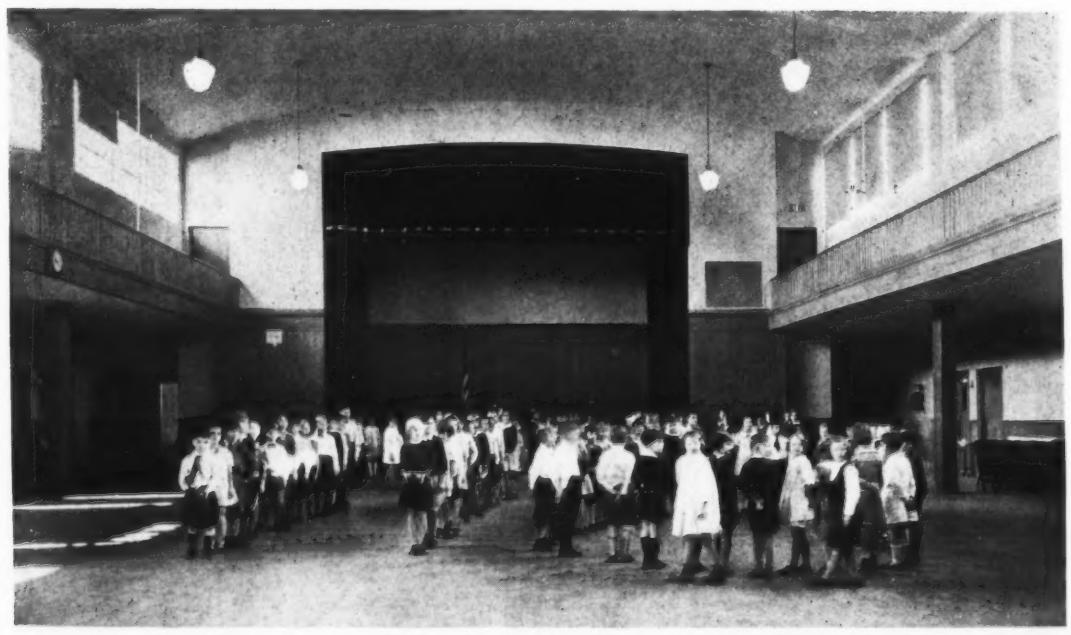


FIRST FLOOR PLAN



BASEMENT PLAN

CENTER SCHOOL, LONGMEADOW, MASSACHUSETTS
Malcolm B. Harding, Architect, Westfield, Massachusetts



AUDITORIUM-GYMNASIUM, CENTER SCHOOL, LONGMEADOW, MASSACHUSETTS
Malcolm B. Harding, Architect, Westfield, Massachusetts

OTTOWA HILLS SCHOOL, OTTOWA HILLS VILLAGE, TOLEDO, OHIO
Mills, Rhines, Bellman and Norhoff, Architects, Toledo, Ohio

The Ottowa Hills School

The Ottowa Hills School, in Ottowa Hills Village, near Toledo, Ohio, was built for a small, exclusive residential district and carries out the Colonial idea in its design and architectural treatment. In developing the plans, the building committee and the architect endeavored to keep it in harmony with the character of the homes in the vicinity, to maintain high building standards with minimum cost, to make the building function educationally, and to produce a building that would satisfy the very rigid requirements of the state. Construction work was begun in April, 1930, and the building was completed and occupied in the following September.

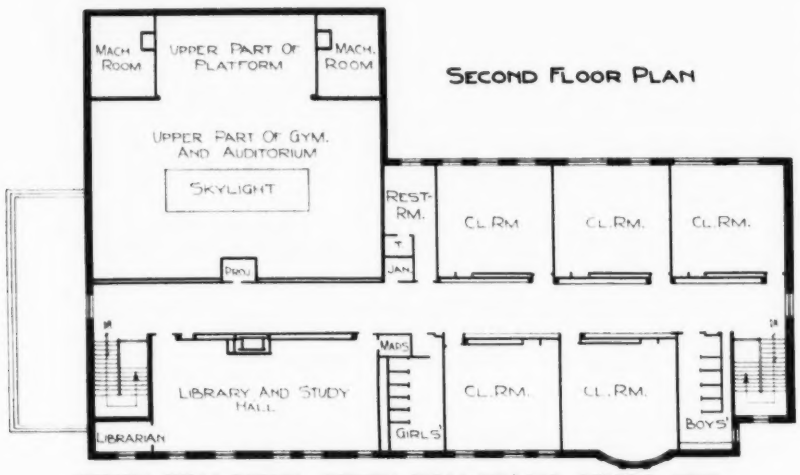
The building is designed in the early American Colonial, with red-brick walls, and gray-white trim. The porte-cochère used by children who come from a distance in automobiles, and the large bay windows add much to the residential character of the design.

The building is of fireproof construction, with exterior walls of brick, gray-stone trim, and bearing columns and floors of concrete and steel. All the windows are steel sash, except in the kindergarten, which has steel casement windows. The floors in the first and second stories are of mastic tile; the halls and gymnasium are wainscoted with salt-glazed brick, while the walls and ceilings throughout are plastered with buff sand plaster. The corridor and stair finish is salt-glazed brick and tile flooring. The classrooms are finished with oak trim and the auditorium has a maple floor. The toilet rooms have metal partitions, plaster walls, and oak trim.

The basement or ground floor has a cafeteria and cooking room, a science room, a sewing room, a shop, a toolroom, a storeroom, toilets, and locker rooms, in addition to space for the boiler and coalrooms. All of the basement by clever designing and grading is on the ground level, with the exception of the entrance to the building. The girls' showers have four dressing rooms and metal partitions; the boys' showers have marble partitions. The boiler and coalrooms have cement floors; the shop has a wood-block floor, while the sewing and other classrooms have hardwood floors.

In addition to six classrooms, the first floor contains a combined auditorium-gymnasium, a restroom, a principal's office, and toilets for

FLOOR PLANS OF THE OTTOWA HILLS SCHOOL, OTTOWA HILLS VILLAGE, TOLEDO, OHIO
Mills, Rhines, Bellman and Norhoff, Architects, Toledo, Ohio



SECOND FLOOR PLAN

OTTOWA HILLS SCHOOL, OTTOWA HILLS VILLAGE, TOLEDO, OHIO
Mills, Rhines, Bellman and Norhoff, Architects, Toledo, Ohio

boys and girls. The kindergarten is located near the main entrance and measures 30 by 28 ft. It has a separate vestibule and entrance so that it may be used independently of the balance of the school.

The second floor contains five classrooms, a library, a study hall, the upper part of the auditorium, and boys' and girls' toilets.

The building which is at present occupied by pupils of the elementary grades and the junior high school, has been planned for extension to accommodate the entire high-school student body.

The building has a number of interesting features which are worth mentioning. The kindergarten, a complete unit in itself, is finished in tan and green. French doors open directly on to the playground and the room is exposed at all times to sun and air. A number of cupboards are concealed behind beautiful wall panels. Lockers for lower-grade pupils are built into the walls facing the classrooms and are directly connected with the ventilating system. On the second floor, recessed steel lockers are located in the corridors. A library case, a supply cupboard, and individual drawer lockers for each child are also found in the classrooms. The blackboards are in graduated heights according to the ages of the pupils, and each classroom has two heights of blackboard, tack and bulletin boards for the placing of classroom material.

The auditorium-gymnasium is 37 ft. 6 in. by 60 ft., and the platform measures 33 ft. by 17 ft. It is wainscoted in glazed brick, and finished in buff plaster, and provides space for a hundred seats. The stage, which is rather deep, contains a flood-lighting system. The room is equipped for sound pictures.

The library on the second floor has a capacity of 70 students at a time. Adjoining is an art room. Homerooms for the sixth, seventh, and eighth grades are located on the second floor.

The administrative offices on the second floor comprise a secretary's office, a waiting room, and a superintendent's office. The secretary's office contains the apparatus for the intercommunicating telephone system, the public-address system, and the program-clock system.

The furniture in the two upper floors is of the movable type, which is especially adapted to the modern socialized method of instruction and greatly facilitates the cleaning of the rooms.

In the basement there is a complete cafeteria and kitchen with a capacity of 85 students.

The building is heated and ventilated with concealed radiation of the unit-ventilator type, and automatic temperature control in each classroom. The toilet rooms, corridors, lockers, coatrooms, and cafeteria are ventilated by a fan system. A steel boiler, with automatic stokers, furnishes the heat.

The building has accommodations for a total of 415 students. It was erected under the supervision of Messrs. Mills, Rhines, Bellman & Nordhoff, architects, of Toledo.

The building cost a total of $162,600, or 30½ cents per cubic foot, or $342 per pupil.

The Piedmont Junior-Senior High School

The junior-senior high school at Piedmont, Alabama, is a one-story-and-basement structure, built in the form of the letter "T," and is intended for a small southern community. The construction work was begun in April, 1930, and the building was completed and occupied in the following September.

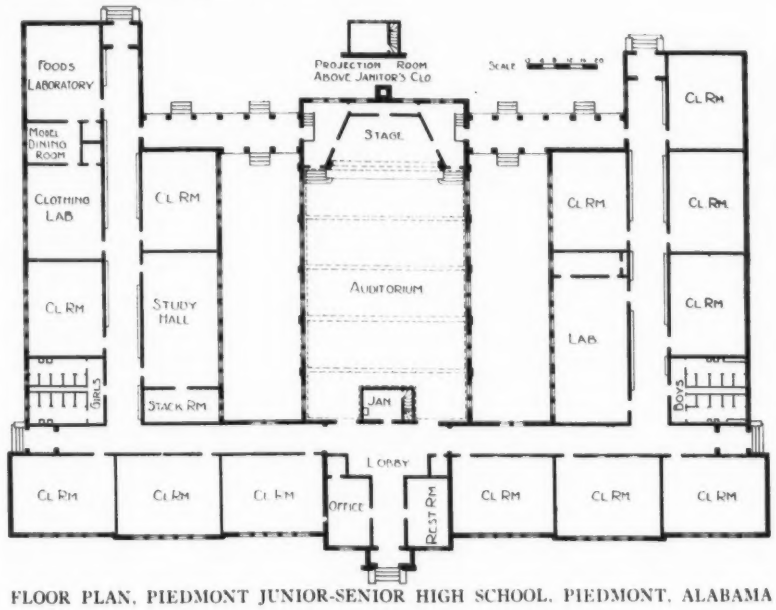
The building measures 229 by 160 ft., and has a frontage of 229 ft. It is constructed of brick and white mortar, with varicolored brick trimming. The corridor and stair finish is plaster in cream and brown finish, with wainscoting in harmony. The classroom, auditorium, and gymnasium finish is similar, and the toilet rooms are finished in cream and white.

The building contains, in addition to twelve classrooms, two laboratories, a commercial department, three library rooms, two artrooms, a book-storage room, a clinic suite, restrooms, and offices.

The auditorium, which seats 1,200 persons, measures 64 by 117 ft. When arranged for gymnasium use, 400 persons may be accommodated as spectators.

The building is heated by a vacuum steam two-pipe heating system, with automatic temperature control. The electrical equipment is complete, including an intercommunicating telephone, program-clock system, and radio receiving outlets. The plumbing is of the modern sanitary type.

The building has a total capacity of 270 pupils and cost $62,500, including the equipment, which cost $10,500. The cost per pupil was $232. The plans were prepared by the state department.



FLOOR PLAN, PIEDMONT JUNIOR-SENIOR HIGH SCHOOL, PIEDMONT, ALABAMA

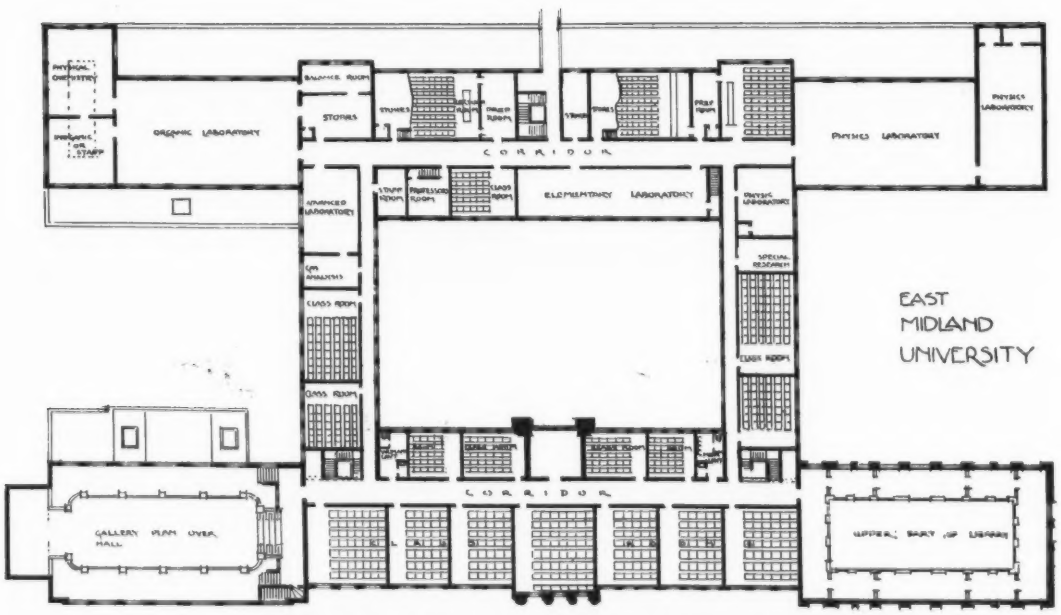
PIEDMONT JUNIOR-SENIOR HIGH SCHOOL, PIEDMONT, ALABAMA

FRONT VIEW, EAST MIDLAND UNIVERSITY, NOTTINGHAM, ENGLAND
P. Morley Horder, Architect

THE GREAT HALL, EAST MIDLAND UNIVERSITY, NOTTINGHAM, ENGLAND
P. Morley Horder, Architect

MAIN AVENUE, EAST MIDLAND UNIVERSITY, NOTTINGHAM, ENGLAND
P. Morley Horder, Architect

THE DINING HALL, EAST MIDLAND UNIVERSITY, NOTTINGHAM, ENGLAND



SECOND FLOOR PLAN, EAST MIDLAND UNIVERSITY, NOTTINGHAM, ENGLAND
P. Morley Horder, Architect

A CLASSIC CLASSROOM BUILDING

John Y. Dunlop

At a time when many experiments in architectural design of school buildings are being made in the United States and elsewhere and when the results of these innovations are more distinguished for their novelty than their success as works of art, it is pleasing to encounter a college building which is frankly classic in style and eminently expressive of the use to which the structure is being put. The recently completed main building of East Midland University at Nottingham, England, has been planned by Mr. P. Morley Horder to convey an idea of the importance of the university in the life of the community, and to provide a structure which in general arrangement as well as in architectural style will be beautiful and serviceable for many years to come.

The building, which is the central feature of the university group, is distinguished by a dignified clock tower which with the pediment below, faces the gardens and a great central avenue. The fenestration of the building is interesting in that the architect has made a successful effort to avoid the monotony which readily distinguishes school buildings with their large and closely set windows. It will be observed that the wings on either side of the main block have round-headed openings in the basement stories and that these contrast pleasantly with the windows in the upper stories.

The second floor plan, which is reproduced on this page, is a key to the general arrangement of the building, with its inner quadrangle around which the departments of arts and the administrative offices have been placed. On the ground floor there is a small hall, a dining room with kitchens, various service rooms, and some classrooms. The central part of the ground floor is taken up with the students' common rooms, lockers and lavatory accommodations.

The first floor contains the great hall, the library, a long range of laboratories, the museum, and the physics workshops. Adjoining the main entrance hall there is a series of administrative offices.

On the second floor there is a series of chemistry laboratories, lecture rooms, classrooms, and small research and work rooms. The great hall and the library extend into this floor.

The third floor contains private study rooms for students and professors and various examination and research rooms. All the science rooms in the building are planned along the north side of the quadrangle.

The building and the terracing in front have been carefully studied in connection with the lake and the park beyond.

The park itself is 220 acres in extent and of this area 94 acres is used for the university buildings proper. The remaining space is employed for athletic purposes. The athletic fields are laid out for the various sports and games.

THE SCHOOL BUDGET

With a good budget system in effect, and audits being made regularly, any school board should be able to give through its superintendent a most satisfactory administration of the school system. It should not overlook, however, the importance of establishing confidence in the minds of the taxpayers by keeping them informed at intervals, through the daily press, of the economical manner of operation through the budget and of the results of the audit. Those on the inside at times do not realize how ignorance of facts by those on the outside cause false rumors to arise, the effects of which are very hard to nullify.—Prof. H. T. Scovill, University of Illinois.

Vocational Histories of City School Superintendents

H. C. Hand, Assistant in Secondary Education, Teachers College, Columbia University

(Concluded from April)

Nature of Previous Position

The specific types of positions held by the superintendents of each group immediately previous to their arrival at the present city-size level are reported in Table VI.

TABLE VI. Percentages of the Superintendents in Each Group Reporting Certain Types of Positions Held Just Previous to Arrival at Present City-Size Level

Type of Position	Group I Below 2,500 (369)	II 2,500–5,000 (91)	III 5,000–10,000 (63)	IV 10,000–25,000 (45)	V 25,000–100,000 (15)	Totals
Rural-school teacher	8.4	1.1	0.0	....	....	5.4
Elementary-school teacher	5.4	1.1	1.6	....	....	3.8
High-school instructor	30.4	12.0	6.4	6.7	20.0	22.6
Elementary-school principal	5.7	2.2	4.8	....	6.7	4.8
Junior-high-school principal	2.2	3.3	....	....	....	1.9
High-school principal	27.9	26.4	22.2	26.6	13.3	26.7
Supt. (Group I)	....	46.2	38.1	6.7	13.3	12.3
Supt. (Group II)	....	....	17.3	11.1	6.7	2.9
Supt. (Group III)	....	....	....	33.3	26.7	3.2
Supt. (Group IV)	....	....	....	....	13.3	0.5
Supt. (Group V)	....	....	....	....	....	....
Supt. first position	11.9	....	....	....	....	7.5
Other	8.1	7.7	6.4	13.4	....	7.9
Not reporting	....	....	3.2	2.2	....	0.5
Totals	100.0	100.0	100.0	100.0	100.0	100.0

Over three fourths, or 67.9 per cent of the whole number, came to administrative responsibilities in their present city-size classifications from but three types of positions, namely, high-school principalships (26.7 per cent), instructorships in high schools (22.6 per cent), and other superintendencies (18.6 per cent). It was discovered that slightly more than a tenth of the superintendents in Group I are now in their first positions in education. The percentages in each group who have used the high-school principalship as a stepping-stone to present responsibilities are, respectively, 27.9, 26.4, 22.2, 26.6, and 13.3. The proportions who passed from high-school instructorships directly into city-school superintendencies decrease from slightly less than a third in Group I to less than an eighth for Group II, and to a little over a sixteenth in Group III and in Group IV. An approximate half or more of the men in all cities above 2,500 population came to their present positions from communities of similar size. The next smaller city-size classifications were found to have supplied slightly less than a half, more than a sixth, a third, and more than an eighth, respectively, of the present administrators in Groups II, III, IV, and V.

Frequencies of Types of All Previous Positions

In this section are reported the types of positions which have typically been employed by the nearly 600 city-school administrators as stepping-stones to positions on higher levels.

TABLE VII. Percentage Distribution of All Positions Held by the Superintendents Previous to Arrival at Present Level

Type of Position	Group I Below 2,500	II 2,500–5,000	III 5,000–10,000	IV 10,000–25,000	V 25,000–100,000	Totals
Rural-school teacher	21.0	11.8	14.9	17.0	8.6	16.9
Elementary-school teacher	7.4	5.0	2.6	2.9	1.4	6.4
High-school instructor	33.8	19.6	12.7	18.8	8.6	23.4
Elementary-school principal	10.9	6.3	9.2	3.5	15.8	9.6
Junior-high-school principal	3.4	1.3	1.5	2.4	8.6	2.7
High-school principal	19.9	16.3	17.4	22.5	14.9	18.7
Superintendent	....	35.3	37.3	32.9	39.1	18.9
Other	3.6	4.4	4.4	....	3.0	3.4
Totals	100.0	100.0	100.0	100.0	100.0	100.0

The percentages reported in Table VII are based upon the total number of positions held previous to arrival at present level listed by the men of each group or upon the entire number named by all of the superintendents.

Of the whole number of jobs previously held by all of the administrators, nearly a fourth were high-school instructorships; slightly less than a fifth were high-school principalships; city-school superintendencies likewise claimed an approximate fifth; more than a sixth were rural-school positions; and nearly a tenth were principalships of elementary schools. These five job-types constitute nearly nine tenths of all previous positions evidenced by the nearly 600 vocational histories. A relatively small proportion (6.4 per cent) of the previous experience of the superintendents was secured in the classrooms of elementary schools, while an even smaller amount (2.7 per cent) was afforded by the junior-high-school principalship.

Community Size of First Position

While the prospective administrator cannot always secure his initial public-school experience where he chooses, it is nevertheless to his advantage to discover what relation, if any, city-size of first position has had to advancement in order that he may place himself as advantageously as possible.

TABLE VIII. Percentages of Superintendents in Each Group Reporting Certain City-Sizes for First Positions in Education

City-Size	Group I Below 2,500 (369)	II 2,500–5,000 (91)	III 5,000–10,000 (63)	IV 10,000–25,000 (45)	V 25,000–100,000 (15)	Totals (583)
Rural	21.7	20.9	31.8	35.5	40.0	24.2
Below 2,500	68.0	49.5	44.4	28.9	39.9	58.7
2,500– 5,000	5.2	18.6	6.4	6.7	....	7.3
5,000– 10,000	1.6	2.2	9.5	4.5	....	2.9
10,000– 25,000	0.8	1.1	....	13.3	6.7	2.0
25,000–100,000	0.8	1.1	....	8.9	....	1.4
Over 100,000	0.5	....	....	....	6.7	0.5
Not reporting	1.4	6.6	7.9	2.2	6.7	3.0

Of the total number of superintendents, nearly three fifths began the climb to larger responsibilities in communities below 2,500 in population, while approximately a fourth began in the rural schools. The percentages of administrators in each group listing the small town (below 2,500 population) as the community of initial experience are, from Group I to Group V, 68.0, 49.5, 44.4, 28.9, and 39.9. These proportions exhibit a tendency to decrease somewhat regularly from nearly seven tenths in Group I to four tenths in Group V. Conversely, the proportions reporting city-sizes above the 5,000 population mark increase quite significantly from the smallest to the largest city-size classifications, the respective percentages being 3.7, 4.4, 9.5, 26.7, and 13.4.

From these data it appears that in general the men who were able to experience their initial responsibilities in the larger communities have enjoyed somewhat of an advantage in the competition for the more desirable superintendencies over those who, either from choice or force of circumstances, entered public-school education in the so-called small towns.

City-Size of Previous Position

The data presented in Table IX may afford some clue as to the nature of promotion which may reasonably be expected by superintendents now serving in communities of various sizes.

There was a very general tendency for vacancies to be filled by men who had previously served in communities immediately lower in the population scale used in this study. Percentages so reported in each group are, from Group II to Group V, 55.0, 22.2, 33.3, and 20.0. A third of the present administrators in Group III came directly from positions in communities two classifications lower in the scale while less than a fifth in Group IV and exactly two fifths in Group V made similar advancements. Three-step progressions were won by 6.7 per cent in Group IV and by 13.3 per cent in Group V. That there has been considerable shift within each of the population ranges or groups is evidenced by the fact that such changes are reported by percentages in each group, respectively, of 76.2, 29.6, 36.5, 33.3, and 20.0.

Shift From State to State

The extent to which the superintendents now in each city-size classification have crossed state boundary lines in their shifts from position to position is shown in Table X.

It will be observed in Table X that nearly three fifths, or 58.7 per cent, of the total number of administrators were serving in the state of initial experience at the time the inquiry form was filled in. Particularly significant, however, is the fact that the percentages in each group reporting no shift from state to state, which are, respectively, 70.2, 53.7, 47.6, 18.9, and 6.6, exhibit a marked decrease from over seven tenths in Group I to less than one tenth in

TABLE IX. Percentages of Superintendents in Each Group Reporting Certain City-Sizes for Positions Held Just Previous to Present Position

City-Size	Group I Below 2,500 (369)	II 2,500–5,000 (91)	III 5,000–10,000 (63)	IV 10,000–25,000 (45)	V 25,000–100,000 (15)	Totals
Rural	3.3	1.1	....	....	....	2.4
Below 2,500	76.2	55.0	33.3	6.7	6.7	60.6
2,500– 5,000	5.2	29.6	22.2	17.8	13.3	11.9
5,000– 10,000	2.1	4.4	36.5	33.3	40.0	9.3
10,000– 25,000	9.3	3.3	6.4	33.3	20.0	4.4
25,000–100,000	0.5	3.3	1.6	2.2	20.0	2.0
Now in first position	11.9	....	....	....	....	7.5
Not reporting	....	1.1	....	4.5	....	1.9
Median City-Size	Below 2,500	Below 2,500	2,500–5,000	5,000–10,000	5,000–10,000	

TABLE X. Percentages of the Superintendents in Each Group Reporting Having Had Experience in Certain Numbers of States

Number of States	Group I Below 2,500 (369)	II 2,500–5,000 (91)	III 5,000–10,000 (63)	IV 10,000–25,000 (45)	V 25,000–100,000 (15)	Totals
One	70.2	53.7	47.6	18.9	6.6	58.7
Two	16.1	22.2	28.7	22.2	33.3	19.2
Three	9.0	15.3	9.5	35.6	40.0	11.9
Four	3.3	5.5	9.5	12.2	13.4	5.3
Five	1.2	1.1	4.7	4.5	....	1.9
Over Five	....	2.2	....	....	6.7	1.0
Not Reporting	2.2	0.0	....	6.6	....	2.0
Median Number of States	One	One	Two	Three	Three	

Group V. This may be regarded as evidence that advancements from the lesser to the larger responsibilities in the field of the city-school superintendency have typically required some shift from state to state. Of the number who have crossed state boundary lines, only small proportions report work in more than four states.

Of the whole number, only small proportions of the superintendents have averaged more than four years in each position. A total of 86.8 per cent report a mean tenure of not more than four years. The percentages in each group with four or less years, which are, respectively, 89.3, 86.6, 89.3, 71.3, and 73.3, exhibit a somewhat irregular decrease from nearly nine tenths to a little over seven tenths as one passes from the smallest to the largest city-size classifications. Conversely, the percentages with averages in excess of four years (from Group I to Group V, 2.8, 8.0, 6.3, 13.3, and 20.0) display a very marked increase in proportion from less than one thirtieth in Group I to one fifth in Group V. Over a third in Group I have averaged but one year in former positions, while decreasingly negligible proportions in Groups II and III, and none of the men in the larger classifications, report so short a period. These proportions with averages of two or less years decrease quite regularly from about two thirds in Group I to about one eighth in Group V. Similarly regular decreases are evidenced by the percentages in each group (81.0, 74.5, 65.1, 53.5, and 46.6, respectively) who have remained on an average of three or less years in former situations.

TABLE XI. Percentages of the Superintendents in Each Group Who Report Having Averaged Certain Numbers of Years per Position in All Positions Previous to Present Position

Average Number of Years per Position	Group I Below 2,500 (369)	II 2500–5,000 (91)	III 5,000–10,000 (63)	IV 10,000–25,000 (45)	V 25,000–100,000 (15)	Totals
One year or less	33.9	6.6	8.0	....	....	23.1
Over one to two years	35.3	32.8	20.6	32.3	13.3	31.5
Over two to three years	11.8	35.1	36.5	31.2	33.3	20.1
Over three to four years	8.3	12.1	22.2	17.8	26.7	12.1
Over four to five years	0.9	4.8	1.6	8.9	20.0	2.7
Over five years	1.9	3.2	4.7	4.4	....	2.7
Not Reporting	7.9	5.4	6.4	15.4	6.7	7.8
Median Number of Years	1.4 Years	2.3 Years	2.6 Years	2.9 Years	3.1 Years	

Age of Entering First Position in Education

The age at which the field of public-school education was entered appears to have had little relation to later advancement. On the whole, no increase or decrease from Group I to Group V is evidenced by the median ages of entering first positions in education (respectively, 23, 23, 22½, 23, 24, and 21). The ranges in ages of the middle half of each group are likewise closely similar.

Age of Arrival at Present Level

The ages at which the superintendents included in this investigation first assumed the responsibilities of educational leadership at each of the present city-size levels (Table XII) should afford some clue as to the rate of progress which is probable in city-school administration.

TABLE XII. Ages at Which the Superintendents Arrived at Present City-Size Levels

Group Population Range	Youngest	Measure of Tendency: First Quartile	Median	Third Quartile	Oldest
I (369) Below 2,500	18	24	26	29	44
II (91) 2,500– 5,000	23	29	32½	36	57
III (63) 5,000– 10,000	23	31	24½	38	48
IV (45) 10,000– 25,000	25	33	36½	42	52
V (15) 25,000–100,000	28	39	42	44	47

The median ages of arrival represent a somewhat regular increase from 26 for Group I to 42 for Group V. The ages of the youngest men to arrive at each of the six levels range with some regularity from 18 for communities below 2,500 to 28 for cities above 100,000, a difference of 10 years. From the extent of overlapping evidenced among the groups by contacts of the interquartile ranges, it appears that numbers of men of probably above average ability have advanced at a more rapid rate than their competitors and have shown a consequent tendency to arrive at the large city-size levels at relatively earlier ages.

Academic Rank at Arrival at Present Level

Although, as already indicated, a knowledge of the present academic ranks of the superintendents is of significance, the student in training may be more concerned with the typical academic status of the city-school superintendents in each group at the time of their arrival at the present city-size level. Superintendents ambitious for advancement will be concerned in discovering how much, if any, advanced training the present incumbents had at the time they were first elected to their present positions.

Exactly one fourth of the superintendents of Group I were assigned to the headship of the school systems of their respective communities before the bachelor's degree had been received. This proportion is sharply reduced to 7.7 per cent for Group II, to 11.2 per cent for Group III, and approaches the vanishing point for the representatives of Group IV. Of the men in the largest city-size classifications, none was without the bachelor's degree at the time of his arrival as city-school superintendent at the present level. Only a very small proportion (4.4 per cent) of the administrators of Group I had earned the master's degree before assuming their present responsibilities. The percentages of master's degrees for Groups II, III, IV, and V show a considerable increase over the proportion reported for Group I and also evidence a general tendency to increase from Group II to Group V. Of the 583 superintendents included in the investigation, only one had earned the doctor's degree at the time of his arrival at the present city-size level.

This evidence supports the conclusion already drawn from a consideration of the data of the present academic ranks; namely, that the candidates for the larger superintendencies increasingly possess the advanced degrees.

TABLE XIII. Percentages of the Superintendents in Each Group Having Certain Academic Ranks at Arrival at Present City-Size Level

Academic Rank	Group I Below 2,500 (369)	II 2,500–5,000 (91)	III 5,000–10,000 (63)	IV 10,000–25,000 (45)	V 25,000–100,000 (15)	Totals
Below bachelor's degree	25.0	7.7	11.2	2.2	....	18.3
Bachelor's degree	69.7	60.4	53.9	42.2	40.0	63.6
Master's degree	4.4	26.4	34.9	51.2	53.3	16.2
Doctor's degree	....	....	....	2.2	....	0.2
Not reporting	0.9	5.5	....	2.2	6.7	1.7
Totals	100.0	100.0	100.0	100.0	100.0	100.0

Salary at Arrival at Present Level

Some idea as to what financial return the city-school superintendency can reasonably be expected to yield has been suggested by a consideration of the data given in Table IV. Of more immediate interest to both the prospective and present member of this occupational group is information relative to the beginning salaries typical of each of the five city-size classifications. This is reported in Table XIV.

The extremely low salaries reported as the lowest for Groups I, II, III, IV, and V, were listed by men who have been in superintendencies on their present city-size levels for a long period of years. The salaries reported in Table XIV show a consistent tendency to advance from the smaller to the larger superintendencies.

(Concluded on Page 132)

The Unit Method of Teaching and the Individual Differences of Pupils

W. A. Vaughan, Superintendent of Schools, Caroline County, Virginia

The existence of wide variations among individuals in the capacity to learn presents a most perplexing problem to solve under the conditions of mass education. It is no new problem in education. Such differences have always existed among pupils everywhere. Teachers have always been aware of it. However, the enactment of compulsory school-attendance laws and the popularization of the concept of universal education have brought into the modern public school children with all kinds of hereditary equipment and environmental background. This has tended to increase the heterogeneity of the school population and to make more pronounced the differences in learning capacity among pupils, which has made more complex the problem of dealing with these differences.

While teachers have always been aware of the existence of such differences, they have known little until recently about the nature, extent, causes, and degree of persistence of these differences in pupils. However, during the past two or three decades scientific studies of pupil differences have thrown much light on the question. The revelations made by such studies have affected profoundly both the theory of education and the methods of teaching.

An acceptance of the principle of democratic education imposes upon schools the responsibility for providing equal educational opportunities for all children. Equal educational opportunities for all children implies an opportunity for each child to learn at his optimum rate. Such an opportunity is not afforded under conditions where all children in a given class are subjected to the same materials of instruction in the same amounts and under the same methods of instruction. If the materials and methods of instruction are adapted to the needs of the average child, both the slow child and the very bright child are thereby denied their educational rights. Yet this is precisely the condition that obtains in many schoolrooms today. It is the result of the development in American schools of a technique of simultaneous instruction of an organized class of pupils in contrast to the method of individual instruction, pure and simple, which obtained in the early ungraded schools of this country. This technique of simultaneous instruction combined with the grading system has brought about a deadening uniformity in progress which has been stigmatized by the phrase "lock step of the schools."

Means of Breaking Lock Step

Many plans have been evolved for breaking the so-called lock step in education. Among the plans evolved are several in which the class organization is retained. Typical of these is the administrative device of more flexible promotional schemes in which semiannual and quarterly promotions of pupils are substituted for annual promotions. This device has helped the situation but has not solved the problem. Then there are the Batavia plan representing an attempt to combine class and individual instruction; the Pueblo plan in which small groups of pupils in a class (three to five in a group) progress at different rates; the plan found in the platoon-type schools where provision is made for special assistance to laggards; the two-track plan in which provision is made for two parallel courses of study, one based on eight years for completion and the other, six years; and the three-track plan in which differentiated assignments are made for three groups classified according to ability.

Homogeneous grouping or the classification of pupils into ability groups, as provided for in the three-track plan, has been used quite widely, but with no uniform method of adapting subject matter and instructional method to the needs of the various ability groups. The usefulness of any plan involving ability grouping is limited by the fact that it can be applied only in large schools.

Among the plans sacrificing class organization are the Dalton Laboratory plan and the Winnetka plan. The former provides for individual work on a curriculum divided into monthly and daily "jobs." The pupil is free to work on these jobs as he wishes, but must complete all of his assigned "jobs" by the end of the month. In the latter plan, the child is put on a piecework basis rather than on a time basis, in acquiring the common knowledge and skills, while group activities and self-expression are taken care of in groups somewhat similar to the old class organization.

The Unit Plan

All of these plans doubtless possess some merit. Certain features or adaptations of these plans could probably be used to good advantage in certain schools or school systems of this state. However, it is too much to expect that any one of these plans could find universal application or even wide application in our schools, for the reason that these plans for the most part would involve drastic reforms in our school organization and administrative practices. The unit method of instruction which will now be described is offered here as a better solution of the problem and as a plan better suited to the needs of many schools especially those in Virginia with which the writer is familiar.

The unit method of instruction which is proposed here, as a means for recognizing individual differences of pupils, is a plan for selecting and organizing subject matter and directing learning in contrast to the old lesson-assignment plan. The plan described is that which has been worked out and used in the schools of Charlottesville city and Albemarle county, Virginia, under the supervision of the Department of Education of the University of Virginia. While the plan has been used in these divisions only in the high-school grades, it is perhaps equally suited to the upper elementary grades.

The basic concept of the unit plan is the individualization of instruction and the adjustment of instruction in both quality and quantity to at least three levels of ability. Under the plan the course of study in a given subject is divided into an appropriate number of units, each unit requiring usually from two to three weeks for completion. The materials of each unit are organized around a significant and unified principle. The unit heading sets forth this unified principle. These units as thus organized are arranged in sequential order for teaching purposes.

Features of Unit Method

The essential features of the unit method of teaching may be stated as follows:

1. A mimeographed work sheet covering the work of each unit is put into the hands of the pupil to guide him in the mastery of the work assigned. This work sheet contains the following:

a) The specific objectives of the unit or the specific learning products sought expressed in terms of abilities.

b) The learning exercises in which the pupil will engage in order that he may acquire the abilities set up as objectives. These exercises are arranged according to degree of difficulty. They provide problems to be solved, judgments and choices to be made, and evaluations to be established.

c) Directions to the pupil for the performance of the learning exercises.

d) Lists of reference materials for each group of learning exercises and directions for use of these materials.

e) Instructions when to pass from one level of the unit to another level.

2. The materials of the unit assignment are arranged for mastery at three levels of ability. The materials of the first level represent the minimum essentials to be mastered by all pupils. This subject matter should provide "direct observation of object or process; pictorial, graphic, or dramatic representation; concrete illustrations from familiar life situations where possible; relationships of obvious kind and little complexity,"[1] and which require no great intellectual discrimination.

The Two Higher Levels

The subject matter of the second level provides additional learning exercises for those pupils of average or superior ability who have mastered the materials of the first level and are capable of doing more. The subject matter of this level, however, should not be more of the same thing set up in the first level. Differentiation should be in terms of degree of difficulty rather than in terms of quantity. The learning exercises here should contain further and more difficult applications of the fundamental principles developed in the first level. The materials of this level should deal with more subtle and complex relationships, requiring greater intellectual keenness to recognize. These materials should be characterized by the use of "verbal abstractions and use of principles as a substitute for direct observation, manipulation, and multiplied concrete illustrations."[2]

The materials of the third level provide additional work for those pupils of superior ability who have completed the work prescribed for the first and second level. This work is, in turn, more difficult than that of the second level. It provides for the development of those abilities required in recognizing relations of elements entering into complex patterns of experience — relations requiring great intellectual keenness to recognize and to apply to the solution of problems. It provides greater opportunity for original and creative work on the part of the pupil.

It is seen, therefore, that the differentiation of subject matter for the various levels of ability is not in terms of quantity alone, but in terms of degree of difficulty principally.

Three Stages of the Units

3. A third significant feature of the unit method is the provision it makes for both group and individual work. One, two, or more class periods at the beginning of each unit are utilized for introducing the unit to the group as a whole. At this time the teacher arouses the interest of the pupils in the work of the unit; establishes a connection between the new material of the unit and what the pupil already knows or with his past experience; gives a general preview of the subject matter of the unit; gives some explanation or help on those portions of the assignment which may be difficult for the group as a whole; and explains the directions for engaging in the learning exercises set up. The introduction of the unit is, therefore, in the nature of an assignment period.

Following the introduction of the unit the pupils work individually on the unit assignment. During this time the teacher moves around in the room and gives assistance to individual pupils where assistance is needed. If in the course of this work it is discovered that some particular phase of the assignment is giving trouble

[1] Windes, E. E., "The Principles of the Unit Method," *University of Virginia Record, Extension Series*, Vol. XV, No. 4, October, 1930, p. 9.

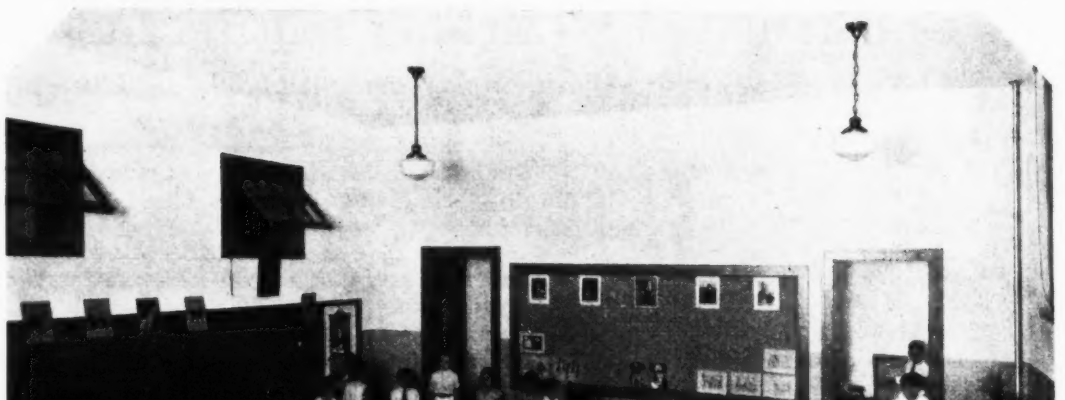
[2] *Ibid.*, p. 9.

to a large number of pupils, the teacher will interrupt individual work temporarily to clear up the difficulty for the group as a whole. The common difficulty cleared up, the pupils again resume individual work.

At the close of the work on the unit, another period is devoted to group work. This period is used for oral reports, special written reports, or group discussion. It is a period of summary and generalization, serving to organize all the subject matter used in order that this subject matter may give the greatest possible significance to the principle which was the concern of the unit.

The unit method is, therefore, a mode of individual instruction which does not surrender the obvious social values that inhere in class instruction.

4. Another significant feature of the unit method is its ease of administration. It can be used in a school of any size or in any part of a school without incurring administrative difficulties. This is not true of other plans involving ability grouping. The unit method, it is true, necessitates the use of mimeographing facilities for preparing the work sheets. This can be handled for a group of small schools by the superintendent's office. A general supervisor of instruction in charge of the method is desirable. Preparation of the unit assignments is handled by heads of departments or gifted teachers.



A PRIMARY GRADE IN THE N. P. BROWARD SCHOOL, TAMPA, FLORIDA

Providing for Individual Differences

Does the unit method provide for individual differences satisfactorily? Does it provide for individual differences better than other methods? It is contended here that it does. It provides for recognition of individual differences through:

1. Provisions for definite assignments covering a unit of work are arranged on three levels of mastery. The tasks set up in the unit are definite tasks. The goals of the unit are definite goals definitely stated for the pupil. The pupil's attention is focused on these goals at the beginning of the unit. All of the tasks of the unit definitely contribute to the establishment of the unifying principle set up in the unit heading. This definiteness of purpose and tasks obtains for the material of each ability level. There are definite prescriptions regarding the mark that will be earned by the pupil.

Moreover, the assignment is a selective assignment in which the subject matter of a given unit of work is broken up into parts adapted to the needs of the various ability levels. The success of the dull pupil in learning the essential things is not jeopardized by subjecting him to a type of mental activity of which he is incapable. Nor is the superior pupil forced to devote his entire time to a type of exercise requiring no mental exertion on his part.

2. Provision is made for use of supplementary material. The references are listed with pages or chapters indicated. These are listed separately for the work of each level. Also they are listed in two divisions for each level: (*a*) essential references and (*b*) supplementary references. One pupil may secure adequate information from the references listed as essential references while another would need to go to additional sources to clear up a problem. It should be noted that this feature provides for differences among pupils who are working on a particular level. This feature of the unit method furnishes a remedy to that practice commonly found in the daily lesson-assignment plan by which all pupils, irrespective of ability, are assigned the same source materials for study.

Directing Study

3. Provision is made in the plan for directed study. It is unnecessary to argue the value of directed study in providing for the needs of individual pupils. It is through supervision of the pupil as he works that the teacher discovers his study habits and study difficulties and is thereby enabled to help the pupil establish habits of economical work. It is by being on hand when the pupil runs into a snag in his work that the teacher can help him over the difficulty and thus keep him from wasting time unnecessarily when there are other more useful activities ahead.

One of the three functions of a teacher is to direct the learning of pupils. The unit method affords the teacher ample time and opportunity for directing the learning of pupils. Under this plan more than three fourths of the school time is devoted to directed study.

4. Full utilization of the laws of learning is made. The unit plan secures good motivation through definiteness of prescription for a given mark. It provides for self-activity rather than passive reception on the part of the learner. It provides for the psychological arrangement of subject matter. It makes possible the retention of knowledge by the application of knowledge and by organizing facts around a significant principle. It is a safeguard against the accumulation of a miscellany of unrelated items of knowledge. It makes of learning an individual matter.

Determinism Avoided

5. The plan furnishes the pupil a definite challenge without humiliation and places him upon his own resources. Tasks of all degrees of difficulty are made available to every pupil. However, he must master the easier tasks before he is eligible to undertake the more difficult ones. This method does not proceed upon the assumption that because a pupil's prior learning has been of a low order, only tasks demanding low ability should be made available to that pupil. This plan does not involve what Dr. Bagley calls "determinism" or marking a pupil for a certain degree of success before he has been given an opportunity. Each pupil has the same opportunity and the same stimulation to put forth his best effort. Each pupil under the guidance of the teacher is allowed to go just as far as he wishes and can, the quality of his mark being contingent upon how far he goes. The unit stands out as a contract or challenge — an alluring "prescribed temptation" to the pupil. It enables the pupil in the lower ability group, whose ambition is greater than his ability, to stretch out as far as he wishes. There are no artificial barriers to his promotion to a higher group. If a pupil is misplaced in the teacher's estimation, he has no trouble in showing it, if placed too low, he works himself up. There is no occasion for him to assume a fatalistic attitude toward his status. He is not branded except as he brands himself. The responsibility for his standing in the group is not upon the teacher or the school organization, but it rests with the pupil himself. On the other hand, if there is a pupil who has been maintaining a high standing in the school principally by his cleverness and wit, this plan will automatically place him back in a lower group where he belongs. The plan is fair. It is democratic. It avoids the humiliation that may come to a pupil from being segregated in a low-ability group. It avoids the errors of classification. It places no limitation on the pupil except that he must show complete mastery of one level of the unit before attempting the next. The plan has its parallel in real life in a democracy where the members of society of all degrees of ability work together with a common aim.

Group Advantages Not Sacrificed

In conclusion, the unit method of teaching seems to offer a reasonably satisfactory solution to the problem of recognizing individual differences of pupils. It provides individualized instruction without sacrificing the advantages of group instruction. It avoids the disadvantages and limitations of those plans involving ability grouping. The slow pupil has the stimulation and help that comes from working with the bright pupil. It develops and preserves a proper social attitude on the part of the pupils. It is easy to administer. It provides for a maximum of directed study and self-activity. It provides equally well for the needs of the superior child and the needs of the slow child. It is in harmony with the widely advocated principle that individual differences should be provided for through a progressively enriched curriculum for the higher levels of ability. The unit method restricts all groups to a common rate of progress, but enriches the content for the superior groups. The plan lends itself readily to the evaluation of curriculum material, teachers and teaching. Where the plan has been used there is some objective evidence of the superiority of the plan over the daily-lesson-assignment plan. Teachers and supervisors who have used the method commend it highly.

It is not contended here that the unit method has in it any magic or power to cure our teach-

(Concluded on Page 132)

Thirteen Principles of Public-School Financial Accounting

Jay L. Chambers, Muskingum College, New Concord, Ohio

Public-school accounting has not kept pace with the increased offerings in the educational programs. As a rule, school executives have assumed that funds raised for educational purposes would be well spent. The public, too, until recent years, has not been too inquisitive about the expenditure of these funds. Of course the public was interested. It demanded reports and frequently made criticisms that were unkind. Then, like an indulgent father to a wayward son, it reached a little deeper into the money bag and increased the allowance.

As administrators began to use objective methods in studying their problem, they needed certain data and facts which could be secured only by better methods of accounting. Financial accounting probably received more attention than the other phases of accounting for schools. Frequently the department of education looked at the problem as one concerning the state as a whole. Men of comprehensive minds saw the problem as nation-wide in its ramifications. As a result, many improvements have been made in public-school financial accounting in practically all cities and in a majority of the states.

Interest in comparative cost studies has influenced these improvements more than any other factor. School administrators desired to compare the functional costs of their institutions with those of other institutions. They desired to use the receipts of other institutions as a lever to increase the receipts of their own institutions. In practically all instances improvements in public-school financial accounting have been made for the chief purpose of making school administrators better administrators. This is a good principle, but it is not sufficient basis for a good accounting system. It assumes too much for one element at the expense of all other elements involved.

The Thirteen Principles

A good school accounting system will furnish all necessary information to the nation, to the state, and to other political divisions, to all school officials and employees, and to the patrons of the school district. The establishing of such a system will necessitate the setting up of certain governing principles. The following thirteen statements have been given the rank of governing principles:

1. There should be sufficient uniformity of classification of accounts to provide for state- and nation-wide comparisons of major items.
2. There should be sufficient diversity to satisfy local peculiarities.
3. The feeling of local responsibility for the efficient and economic administration of all funds should be preserved and encouraged.
4. Internal check should make pilfering from the funds highly improbable.
5. The system should make state supervision and inspection a minor factor rather than a major one.
6. The principle of contractual obligation should prevail.
7. Receipts should be accounted for both as to fund and source.
8. Expenditures should be accounted for both as to fund and function.
9. It should be possible to expand or contract the system to suit the needs and sizes of all administrative units of the public schools of a state.
10. Frequent financial reports should be provided.
11. The training of the clerks who are to keep the records should be taken into consideration when forms are devised.
12. The system should provide for a complete record of all assets and liabilities.

School authorities who have studied financial school accounting have dealt for years in terms of systems and forms rather than in underlying principles. The present paper is the first formulation of definite principles which can be applied to both city and state school accounting. A later paper by Dr. Chambers will show how these principles underlie all successful state and city accounting systems and how they can be applied to any state or city system. — The Editor.

13. The principle of fund accounting should control.

Uniformity Essential

1. The United States Office of Education collects valuable data pertaining to school receipts and expenditures. The forms used for this purpose conform to the division of accounts recommended by a committee of educators appointed by the National Education Association, and are applicable to any school district. Any good accounting system should provide the information asked for by the Office. It may be desirable, and frequently is, to make different arrangements of these accounts and to add to them, subtract from them, or to group them, but in setting up a new method for the recording of financial transactions of a school district, the information sought by the Office of Education should be a governing factor. Thus, facts of prime importance to an intelligent study of school finance will be made available. There is no good argument against a sufficient uniformity of school accounting to facilitate the comparisons of major items of receipts and expenditures.

2. National uniformity of school accounting should not be so extensive, however, as to kill the initiative and genius of a state organization. The laws, habits, and thoughts of the people of Minnesota, for instance, need not be identical with the laws, habits, and thoughts of the people of Kentucky. Minnesota administers state aid to the larger districts under two accounts, while Kentucky chooses to administer all state aid to all districts under one account. The school laws of New Jersey provide for such accounts as current expense, repairs and replacements, manual training, vocational, continuation classes, evening schools for foreign residents, library, debt service, and capital outlay. The commissioner of education of New Jersey has provided an accounting system that will take care of the above accounts and in addition make available all the facts the United States Office of Education requests.

Ohio uses as major divisions of accounts such terms as personal service, supplies, materials for maintenance, equipment replacements, contract and open-order service, fixed charges and contributions, debt service, and capital outlay. The various accounts falling under these main divisions can easily be arranged to furnish the information needed by the Office of Education.

Not only is it well to have diversification of accounts, but it is probably desirable for a state to design its own forms so as to better serve its requirements. As an example, Indiana prefers the distribution of expenditures under major functions, so the state department of education has designed accounting forms which will facilitate this method of recording. Ohio prefers to use a ledger page for every kind of account. Pennsylvania is satisfied with one cash-receipts book. Ohio has two such books and requires every receipt to be entered in each book.

Local Responsibility to be Encouraged

3. The school district should feel the responsibility of seeing that all school funds are handled efficiently and economically. Any accounting system which robs the people of this responsibility robs them of their birthright. The Pennsylvania school laws provide that the financial records of every school district shall be audited as follows: "In all districts of the first class by the district controller. In all school districts of the second and third class, by the proper city, borough, or township controller or auditors therein. If the annual operating receipts of a second-class district exceeds the sum of $500,000, the district may employ a certified public accountant for the audit."

Minnesota requires the treasurer and the clerk of a school district to keep similar records of the receipts and disbursements. At the end of the fiscal year the treasurer makes a report to the board. The board of education of the district must appoint a committee to audit the financial records. The president and clerk must then publish the treasurer's report and make a statement above their signatures as to its accuracy.

Safety Against Theft

4. It should be considered nothing less than criminal negligence for a state to set up a financial system which makes it possible for one man to pilfer from school funds. Adequate internal checks should account for every dollar. The person who receives and disburses money should not be the only person who keeps records of such transactions. Usually, the treasurer should receive all money and pay all warrants. When money is deposited with the treasurer, the person making the deposit should be required to give an itemized statement of the amount to the clerk of the school board who should enter the receipts properly and file the statement. For instance, tuition receipts should be received directly by the school treasurer, an itemized statement of all tuition due having been given to him and the clerk. The treasurer, in turn, should furnish the clerk a list of all tuitions collected.

To illustrate the importance of this principle a citation may be given from the plan of distributing railroad taxes to the independent graded school districts, used by Kentucky in 1920. A state commission assessed all railroad property subject to taxation. Every independent school district sent its rate of taxation to the commission. The commission collected the taxes, and sent the amounts due the independent school districts of a county, to the county superintendent of schools. The county superintendent of schools received this sum in one check accompanied by a statement of the amounts due the independent districts of the county. He deposited the commission's check and drew on the account to pay the districts. He satisfied the law by merely stating the source of the money. No statement was furnished the district school boards by the commission. The state made the assessment, collected the taxes, and should have seen that the proper amounts were distributed. It was the common practice in the state for the school districts to accept the county superintendent's check as the correct amount due. In auditing the books of one of these districts a few years ago the writer discovered that the county superintendent had withheld from the school district nearly $3,000 in a period of five years. Had the state commission furnished this school board the proper information, this shortage could not have occurred.

At the close of a fiscal year the treasurer should furnish the school board an itemized statement of all receipts and disbursements. The board should reconcile the statement of the treasurer with the clerk's books and publish a well-classified report for the benefit of the patrons and taxpayers.

If the board has the responsibility of collecting school taxes, a delinquent-tax list should be published from time to time. If some other department of the local government collects the school taxes, such a list should be furnished the board. The amount of delinquent taxes collected between publication dates should be given at the beginning of the list.

The budget proposed for the succeeding year should be published before its adoption. The current budget should be published at the time the proposed budget is published, and increases and decreases of the various items should be stated.

State Audits

5. The state should always have the power to inspect and audit the financial records of a school district when conditions seem to warrant this participation. The state authorities should be the sole judge as to whether they should make a voluntary inspection or audit. There should be a provision, however, whereby certain local authorities could force a state audit or inspection. But it seems unwise for a state to devise an accounting system for its school administrative units on the sole principle of state inspection and supervision. The state should emphasize local responsibility, local inspection, and internal checks. The idea of state inspection by itself destroys the spirit of democracy and teaches local governmental units to shirk their responsibilities.

In one state where the sole responsibility for auditing and inspecting the books of local units was vested in the state department of education, flagrant violations of the school laws in many districts were corrected by local political action after the state department had ignored them for years. A few cases are reported below.

This state requires teachers' salaries to be paid in cash at the close of the school month, and permits school boards to borrow on anticipated receipts, if necessary, to pay these salaries. In one of the counties the county superintendent of schools and a banker had a working agreement under which the superintendent would pay teachers with interest-bearing warrants and the banker would discount the warrants. The county superintendent who had control of the school funds would write a check on the funds and take up the warrants. The discounts would be divided between the banker and the school superintendent. Complaints were made to the state department of education. The state superintendent of education, an elective officer, pleaded his inability to find sufficient proof to dismiss the county superintendent. Finally an enraged citizenry secured justice by court action.

More Examples of State Inefficiency

Another county board of education in the same state for a number of years erected school buildings out of the funds which the school laws specifically set aside for teachers' salaries while teachers who would accept them were paid with interest-bearing warrants and good promotions. Time after time the county superintendent was given an inspector's certificate that the school funds were handled according to law. The district court finally ordered an investigation of the school records. As a result several true bills were returned against the school officers.

In a mountain county of a southern state a prominent northern church denomination had established a mission school. After a few years of successful operation its financial supporters seemed to have grown weary. The mission board and the county school board formed a joint board, the result of which was to give the church-school organization control of the public-school funds. This joint board operated the public-school funds for many years against the protests of the organized minority in the county. The state department of education ordered the dissolution of the joint board after an active campaign in the county had created a great deal of opposition to it.

These cases are cited not for the purpose of discrediting state supervision, but to call attention to the fact that school administrators in general have been more interested in getting authority than in realizing the responsibility of authority. The state has taken too much of a parental attitude. It has frequently undertaken the task of relieving its children of self-control. The wise parent will permit the child to assume some responsibilities. The good state school system will not rob its local governmental units of all responsibility of authority.

Living Within Means

6. The expenditures of a school district should not exceed its receipts. The persistent violation of this fundamental principle of school finance will inevitably lead to trouble. It often happens that a school board spends more money than it has because its accounting system does not show the exact status of the school funds at all times.

A good accounting system for a school district should consist of a budget, an appropriation statement or statements, a set of books which are designed to show at all times the unencumbered balances of all appropriated accounts, and a complete set of reports which must be sent to the proper authorities at frequent intervals.

Whenever the school laws of a state provide for a budget and make the school board financially and criminally responsible for living within the budget; and, further, whenever the school laws make it mandatory for the state to devise a set of accounting records which will enable a school board to know whether or not it is living within its budget, a great forward step will have been taken in solving the ills to which school boards in general are subject.

The New Jersey and Ohio school accounting forms are designed to enter immediately against the appropriation items any authorizations or obligations which the school board makes. These authorizations and obligations are subtracted from the existing balances. This should prevent any board from unwittingly exceeding its budget.

Recording Receipts and Expenditures

7. Almost everyone likes to know the sources of school receipts. This information is helpful to school administrators and boards who are seeking new ways of increasing school revenues or who desire to offer suggestions for a more equitable distribution of the ever-increasing school-tax burden. And everyone is anxious to know that when money is raised for certain purposes it will be used for those purposes. It becomes necessary, then, to keep a record of school receipts both as to sources and funds.

8. If it is necessary to record receipts by funds, it follows that expenditures must be recorded by funds. Fund accounting for expenditures, however, will not be detailed enough. The classification is entirely too large. Functional classification is much more minute and is much more satisfactory. It is much better to know how much of a fund has been expended for instruction salaries, for water, books, coal, and items of this kind. School expenditures are best accounted for if functions and funds are both taken into consideration.

9. It is readily seen that the method of accounting for expenditures can be extended indefinitely. For instance, the fuel account can have any number of divisions, such as hard coal, soft coal, steam coal, wood, gas. Instruction can be divided into teachers' salaries, elementary, high school, male, female, white, colored, language, mathematics, and others; instruction supplies, paper, ink, pencils, pens, chalk, and others. A large city system will need numerous and detailed accounts, while a one-teacher rural school will need but few general headings. There are a few large functions common to practically every school district. These should constitute the basic large accounts under which all expenditures may be classified. These accounts can be expanded to suit the needs of the larger districts.

Reports and the Accountant

10. The accounts should be arranged in the various books in the order which they appear in the budget, the appropriation statement, and all report forms, so that frequent summary statements may be made with as little effort as possible. Such reports will require the clerk and treasurer to reconcile their books at short intervals of time and will increase the efficacy of this internal checking device.

11. No accounting system will function by itself. A good system poorly kept may not serve the district and state so well as a fair system well kept. In a recent study of the records of a school districts of a state whose accounting forms are quite complex, the writer found that 77 per cent of these clerks make no effort to carry out the purpose of the accounting system. These clerks had had no training for this work. Not one of them had high-school training. Most of these men had attended rural schools 25 or 30 years ago.

In setting up a public-school accounting system and designing forms for it, the state cannot afford to disregard the qualifications of the clerks who are to use it. Some state officials are now advocating the certification of school-board clerks. This thought deserves the attention of school administrators.

Accounting for Assets

12. It is just as important to keep track of supplies, equipment, buildings, and other assets as it is to purchase them, but it is the unusual district that does so. Very few school boards have a complete record of the district's assets. Library books, school desks, janitor supplies, office equipment so far as bookkeeping is concerned are treated as though they were worthless trash.

In 1929, the writer inspected the books of three small city school systems. The populations of these cities were approximately twenty thousand, thirty thousand, and fifty thousand. Not a one kept equipment records, or supply records. No inventories were taken at the close of the school or fiscal year. Yet, these cities employed well-trained clerks. The state did not require such records; it did not even suggest that such be kept. One of the cities, however, employed a commercial firm to make an appraisal of its property every two years for insurance purposes.

Down in Kentucky there is the little county of Bath, poor in wealth, but rich in the possession of a wonderful county superintendent of schools. He has been county superintendent for years. In his office one will find a complete account of every piece of property the school board owns and a description of each — stoves, shovels, mop buckets, oil spreaders, desks, chairs, library books. He knows the size of the windowpanes for every building. Moreover, at the close of the school year a complete inventory of all supplies and equipment is taken. A note is made of the physical condition of these things.

Of course, good accounting demands that a complete record of the school district's liabilities is at hand at all times.

Asset Accounts

13. Books, equipment of all kinds, buildings and plant assets in general should be carried on the books at purchase price plus freight and cartage, and usually installation cost, as long as they are in use. As an educational institution is not a profit-making organization, it is unnecessary and even unwise to depreciate its assets on the books. The late President Eliot of Harvard University maintained that it is the duty of an educational institution to spend all the money it can get. It is usually deemed a dangerous practice to establish a reserve fund for any-

(Concluded on Page 135)

Radio Education

E. D. Jarvis, Fort Recovery, Ohio

Article V—Immediate Preparation for Radio Lessons

1. Place for Receiving Broadcasts

To the school administrator who is introducing radio, a question of importance is, Where shall we listen? In the first use of radio the auditorium was the only place in which the programs might be received. At that time, the equipment of a school consisted usually of one set, more or less permanently placed. The set was, of course, used infrequently and only for programs of national importance. With the inception of regularly scheduled radio lessons difficulties in the use of auditorium receiving sets were quickly magnified. Most schools in smaller communities do not have the funds with which to buy, for an auditorium of usual size, equipment of proper type and strength to make listening ideal. Many auditoriums are equipped with one loud-speaker of the usual type. This speaker must be overloaded to produce sound waves capable of reaching the corners of the room, with the result that the program is greatly distorted. With the acoustic chaos usually existing in a half-filled auditorium, a perfect pandemonium of noises is the net result. Where two or three ordinary loud-speakers are utilized, the result is as bad or perhaps worse, caused by poor acoustical conditions in an auditorium built without considerations for use in radio reception.

The question, "Were broadcasts received in classrooms?" or "In auditoriums?"[1] showed that a great majority of the schools coöperating in Ohio in 1929–30 used the classroom in preference to the auditorium. Quite a few used both, but very few were equipped for auditorium listening alone. A summary of the situation follows:

Where Broadcasts Were Received

Classrooms	282
Auditorium	174
Assembly Room	4
Study Hall	3
Radio Room	3
Music Room	3
Hall	3
Special Room	1
Basement Room	1
Office	1
Dining Room	1

The same report showed 80 schools receiving the broadcasts in classrooms and 73 in auditoriums. This is evidence that administrators are realizing the effectiveness of classroom listening over auditorium reception.

Auditorium reception necessitates the shifting of all classes to this room. This means the loss of several valuable minutes in passing to and fro between rooms as well as time lost in the confusion of being settled in new surroundings and adjustment to them. Sometimes all this loss of time has been in vain, as in the failure of the local current supply, the inappropriateness of the program after it starts, the failure of the radio teacher to arrive or to be on time, static, and other conditions difficult for the classroom teacher to control. In the classroom this loss of time may be negligible, for it means only turning off the radio, and the beginning again of regular work.

Advantages of Classroom Reception

Programs in the classroom may be made much more selective. Auditorium reception usually means the listening of large groups not closely allied in ages or in interests. In classroom reception pupils of nearly the same age, mental development, and similar interests are already homogenously grouped, and listening may become specialized. An agriculture class need not listen to a lecture on cooking, neither need the home-economics class listen to plays and rhythms for primary grades. Each class will use only that broadcast which particularly fits them or perhaps only a part of a broadcast which is peculiar to their interests.

Reception in the classroom may be more easily integrated in the fiber of pupil accomplishment. The atmosphere of the classroom is present, preparation for reception may be made, listening conditions are ideal, and review is possible immediately following the lesson.

With the phonographic and microphonic attachments now being installed in schools, classroom reception may be as versatile and diversified as the auditorium for any kind of group of children. With a little experimentation it will be possible to introduce into the classroom practically every type of activity desired for the pupils.

However, even in classroom reception certain difficulties are presented. In using the radio lesson the teacher should consider whether the room in which the program is to be received is so situated that the noise will not disturb some other class. On the other hand, the room should be isolated from persistent noise from without. An open window over a playground which is in use will mean that the reception will be difficult, probably useless. A room next to a room filled with typewriters in use may not be ideal for reception unless the walls are nearly soundproof. The more nearly a room approximates isolation from exterior sounds, the more desirable will it become for radio reception. In the same way, first-floor rooms should not permit the distraction of the pupils' attentions by visual occurrences outdoors. The ear's attentiveness may be easily disturbed or completely diverted by trivial happenings which children see. The room must be equipped with shades to be drawn or raised at times when concentration is essential.

Physical Conditions

The room must be well ventilated, and an attempt should be made to keep the temperature near 69 deg. F., because listening becomes difficult if the room is warm or the ventilation so poor as to produce drowsiness or physical lassitude.

The classroom must be made into a veritable visual laboratory to supplement the auditory stimuli upon which the radio lesson is based. The atmosphere should be made to simulate the conditions of the broadcast as near as possible. If the broadcast is a typical lesson, pictures, charts, globes, maps, models, blackboard outlines, drawing, decorations, display materials, and experiments all have their place and must be provided to make the lesson concrete.

Many classrooms present distinct disadvantages for listening. Acoustical conditions are poor and in some rooms there are disadvantages, making listening undesirable. Large glass areas, which prevail in many combination classrooms, make radio reception difficult because of their tendency to produce echoes. High ceilings, peculiar shapes, and different building materials used in construction are other hindrances. In Germany, efforts are made to overcome some of these disadvantages in classroom reception. The walls are draped with curtains, especially the back wall, and narrow curtains are suspended oftentimes from the ceiling about midway between the front and back. The latter curtains are about 4 ft. wide and extend across the width of the room.

The Children's Charter

PRESIDENT HOOVER'S WHITE HOUSE CONFERENCE ON CHILD HEALTH AND PROTECTION
RECOGNIZING THE RIGHTS OF THE CHILD AS THE FIRST RIGHTS OF CITIZENSHIP
PLEDGES ITSELF TO THESE AIMS FOR THE CHILDREN OF AMERICA

FOR every child spiritual and moral training to help him to stand firm under the pressure of life

II For every child understanding and the guarding of his personality as his most precious right

III For every child a home and that love and security which a home provides; and for that child who must receive foster care, the nearest substitute for his own home

IV For every child full preparation for his birth, his mother receiving prenatal, natal, and postnatal care; and the establishment of such protective measures as will make child-bearing safer

V For every child health protection from birth through adolescence, including: periodical health examinations and, where needed, care of specialists and hospital treatment; regular dental examination and care of the teeth; protective and preventive measures against communicable diseases; the insuring of pure food, pure milk, and pure water

VI For every child from birth through adolescence, promotion of health, including health instruction and a health program, wholesome physical and mental recreation, with teachers and leaders adequately trained

VII For every child a dwelling place safe, sanitary, and wholesome, with reasonable provisions for privacy, free from conditions which tend to thwart his development; and a home environment harmonious and enriching

VIII For every child a school which is safe from hazards, sanitary, properly equipped, lighted, and ventilated. For younger children nursery schools and kindergartens to supplement home care

IX For every child a community which recognizes and plans for his needs, protects him against physical dangers, moral hazards, and disease; provides him with safe and wholesome places for play and recreation; and makes provision for his cultural and social needs

X For every child an education which, through the discovery and development of his individual abilities, prepares him for life; and through training and vocational guidance prepares him for a living which will yield him the maximum of satisfaction

XI For every child such teaching and training as will prepare him for successful parenthood, homemaking, and the rights of citizenship; and, for parents, supplementary training to fit them to deal wisely with the problems of parenthood

XII For every child education for safety and protection against accidents to which modern conditions subject him—those to which he is directly exposed and those which, through loss or maiming of his parents, affect him indirectly

XIII For every child who is blind, deaf, crippled, or otherwise physically handicapped, and for the child who is mentally handicapped, such measures as will early discover and diagnose his handicap, provide care and treatment, and so train him that he may become an asset to society rather than a liability. Expenses of these services should be borne publicly where they cannot be privately met

XIV For every child who is in conflict with society the right to be dealt with intelligently as society's charge, not society's outcast; with the home, the school, the church, the court and the institution when needed, shaped to return him whenever possible to the normal stream of life

XV For every child the right to grow up in a family with an adequate standard of living and the security of a stable income as the surest safeguard against social handicaps

XVI For every child protection against labor that stunts growth, either physical or mental, that limits education, that deprives children of the right of comradeship, of play, and of joy

XVII For every rural child as satisfactory schooling and health services as for the city child, and an extension to rural families of social, recreational, and cultural facilities

XVIII To supplement the home and the school in the training of youth, and to return to them those interests of which modern life tends to cheat children, every stimulation and encouragement should be given to the extension and development of the voluntary youth organizations

XIX To make everywhere available these minimum protections of the health and welfare of children, there should be a district, county, or community organization for health, education, and welfare, with full-time officials, coordinating with a state-wide program which will be responsive to a nation-wide service of general information, statistics, and scientific research. This should include:

(*a*) Trained, full-time public health officials, with public health nurses, sanitary inspection, and laboratory workers

(*b*) Available hospital beds

(*c*) Full-time public welfare service for the relief, aid, and guidance of children in special need due to poverty, misfortune, or behavior difficulties, and for the protection of children from abuse, neglect, exploitation, or moral hazard

For EVERY child these rights, regardless of race, or color, or situation, wherever he may live under the protection of the American flag

[1] Annual Report of the Ohio School of the Air for 1929–30, II, "Use of the Radio Lessons."

2. Who Listens to Broadcasts?

Of the total 95,000 pupils who listened to the Ohio School of the Air in 1929–30, the elementary grades seemed to be greatest in number. This, however, would not be an indication that administrators think that pupils in grades one to eight listen more successfully than high-school students. There are more pupils in the elementary grades and there were more usable programs for the grades. Another factor, determining the number of pupils listening, was the comparative ease with which most of the pupils in grades one to eight could arrange to listen, while in the high school special time-schedule arrangements had to be made to permit listening. These figures for the listening pupils do not furnish grounds for any generalization.

However, one thing deserves attention and consideration. More pupils listened in grades six and seven than elsewhere. This, again, may be partly due to the success of one or two of the teachers offering the radio lessons for these groups. There may be reason for thinking that pupils in these two grades listen more easily than others or that subjects for radio lessons are more easily adapted from the material usually presented at this age level. These points are, of course, subject to debate and will require experimental verification as will most other opinions regarding the use of radio lessons.

Radio in Primary Grades

There is a group of administrators who have used the radio lessons and who believe that no broadcast lesson can be understood or made valuable to children in the first and second grades. They consider 9 years to be the approximate age when a child may begin to listen successfully. This is the opinion in England.[2]

There is likewise another group who have used radio lessons and who believe that a broadcast lesson may be utilized in a very effective way by pupils from grade one upward. It is their contention that a large reason for the ineffective use of broadcasts in the first two grades is the poor physical listening conditions which exist, the poor type of loud-speakers quite frequently in use, and the lack of adequate preliminary preparation of these smaller children. It is interesting to note that during 1929–30, in Ohio approximately 10,086 first-grade pupils listened, as against 10,692 for the sixth grade, and 10,583 for the seventh grade, while all other totals are less than these.

Although most subjects can be broadcast if the teacher at the receiving end will coöperate to the full extent of her ability, it seems true that several subjects lend themselves much more readily to radio lessons than others. Most phases of social science are fraught with immense radio-lesson possibilities.

Subjects for Radio Reception

In the evaluation of the broadcasts of the Ohio School of the Air it is interesting to see which subjects had the greatest number of listeners, who had listened regularly enough to be able to evaluate the different subjects.[3] The subjects are given below in the order of the number of people making evaluations. Of course, here again, the teacher's ability to broadcast a good lesson has largely determined the number of listeners. Nevertheless, it seems that this should be a fair indication of what teachers feel they need most and what can be most easily used as a radio lesson.

Subject	*Total Reporting*
Geography — Studies in Our Own Country	231
Story Plays and Rhythmics	207
Geography — Studies in Foreign Lands	198
Nature Study	196
Stories for Primary Grades	194
History Dramalogues	182
Current Events	175
Health Talk	147
Literature by Living Writers	142
Art Appreciation	141
Mound Builders	114
Citizenship	114
Drama for High Schools	88
Little Red Schoolhouse Course in Music	77
Physics	76
Chemistry	74
Every Pupil Test	71
French	42

In addition to social-science phases, stories, rhythmics, and nature study seem to have been particularly well received in the schools. However, many of the subjects which appear at the lower end of the table above seemingly should offer great opportunities in lending themselves to radio lessons. French, which is at the bottom, can be taught, as well as other foreign languages, via the radio. We have yet, perhaps, to perfect the technique. Foreign countries have made their greatest strides in radio by teaching modern languages.

Results Evaluated

The subjects offered by the Ohio School of the Air were evaluated on ratings of: E, excellent; G, good; F, fair; and P, poor.[4] This must have depended, of course, largely upon the ability of the broadcasting teacher, but no doubt those subjects ranking highest were more easily made into radio lessons than some of those ranking high. They also represent a felt need on the part of the teachers for supplementary work.

Evaluation of Broadcasts

Subject	*Per Cents* E	G	F	P
Geography — Studies in Our Own Country	61.9	35.9	1.7	.4
Geography — Studies in Foreign Lands	57.0	39.4	2.5	1.0
Art Appreciation	44.6	43.2	11.3	.7
Nature Study	44.3	39.8	14.2	1.5
Current Events	44.0	39.4	14.2	2.2
Story Plays and Rhythmics	43.9	32.4	14.2	9.1
Stories for Primary Grades	34.5	46.4	11.8	7.2
Citizenship	33.3	57.9	8.7	00.0
Literature by Living Writers	32.4	51.4	14.0	2.1
Health Talks	31.9	58.5	8.8	.6
History Dramalogues	30.7	41.7	21.4	6.0
Drama for High Schools	29.5	26.1	32.9	11.3
Physics	28.9	51.3	11.8	7.9
Little Red Schoolhouse Course in Music	20.7	55.8	15.5	7.8
Chemistry	20.2	47.3	22.9	9.4
French	14.3	42.9	26.2	16.6
Every Pupil Test	12.6	50.7	21.1	15.5

The type of class to receive the broadcast lesson largely determines the effectiveness of it. In general, it would seem that the more homogeneous a group is the more effective will the lesson be. The ages and mental abilities of each pupil, especially in the lower grades, should be similar. In the older classes there will be a need for ability grouping. A class of bright pupils or a class of average pupils will listen with much greater benefit than a class composed of both types.

3. How Many Should Listen?

The number of pupils who are to listen will depend upon the subject to be heard and the age of the children to receive the broadcast. For the type of radio lesson giving ordinary instruction — facts, and more or less of the lecture type — the average-sized class may be used. In the high school, about thirty pupils; in the grades, certainly very few more than that number. However, if the broadcast is to call for a special type of activity, perhaps 20 to 25, or even less, will be the limit. For an appreciation lesson a larger number might listen with moderate success, provided seating arrangements and acoustical conditions make it possible for all pupils to hear readily.

When the radio lesson is used in the primary grades, an effort should be made to have the pupils in a semicircular arrangement around the loud-speaker, and the speaker should be movable so that it may be placed near to, and on a level with, these smaller pupils. The smaller the group, in the primary grades, the more may be accomplished.

4. How Long Will a Group Listen?

The length of time a group may listen is determined by their ages and the type of lesson being broadcast. The lower grades will not be able to give sustained auditory attention over a very long period of time. Perhaps 20 minutes is as long as they should be expected to listen continuously. In the higher grades, 30 to 35 minutes seems to be the limit of attention. This matter, of course, needs experimental research in order to determine with any degree of accuracy, a time limit for children of various ages. The straight topical talk or lecture will not permit as lengthy a broadcast as will the radio lesson, which is broken by various devices and varied voices. Dialogue ought to prolong effective listening.

It has been found that the mean length of time that a pupil listened to the Ohio School of

(Concluded on Page 150)

[2]Koon, C. M., "Educational Broadcasting to Schools in England, N. P." part of doctor's thesis at Ohio State University.

[3]Annual Report of the Ohio School of Air for 1929–30, III, "Evaluation of Broadcasts."

[4]Annual Report of the Ohio School of the Air for 1929–30, III, "Evaluation of the Broadcasts."

THE STUDENT COUNCIL OF THE INTERMEDIATE UNIT, WEEHAWKEN, NEW JERSEY

Schoolroom Daylighting

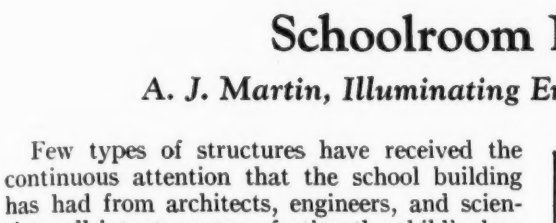
A. J. Martin, Illuminating Engineer, Detroit, Michigan

Few types of structures have received the continuous attention that the school building has had from architects, engineers, and scientists, all intent upon perfecting the child's daytime home to its utmost. Any detail which may conceivably decrease the pupil's susceptibility to disease, or increase his capacity to learn, is sure of consideration from the majority of school designers.

Standardization of classroom sizes is the result of such detailed analysis of pupil needs, and with this standardization have come recommendations for other architectural features of the building, such as windows. Many states specify the relation of window area to floor area for classrooms, also the location of the window head with relation to the ceiling, and the height of window sills above the floor.

These recommendations appear to be the result of observations taken in school buildings as they were constructed — "cut-and-try" methods which have finally evolved into the efficiently daylighted school buildings many of our cities now enjoy. From successful window installations, rules for areas were formulated, such as the rule requiring that ". . . *the window-glass area in a schoolroom should not be less than 20 to 25 per cent of the floor area.*"

This rule has been the subject of much discussion of late, many architects protesting that so large an area of windows imposes a distinct hardship on the designer who prefers to introduce "mass" in the architectural treatment of the exterior and make up any deficiency in lighting by the use of electricity. On the other hand, many designers are following the lead of European architects and increasing window areas, producing a real daylighted school and a school architecture not tied to the traditions of Greek temples nor Colonial courthouses.



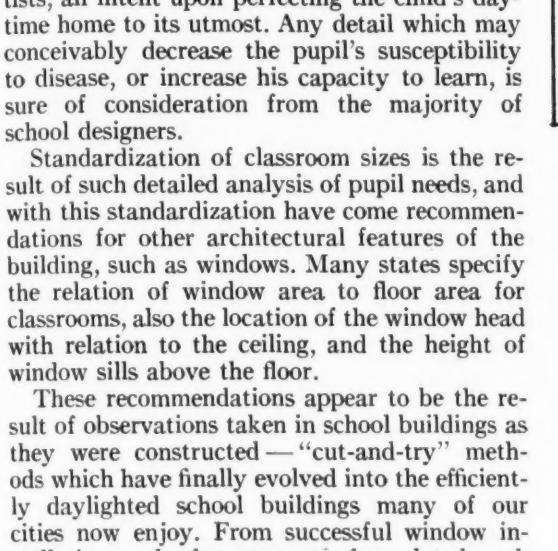
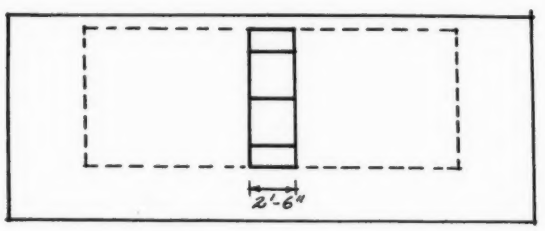


FIG. 1
THE EFFECT OF HORIZONTAL BLOCKING ON MINIMUM DAYLIGHTING

Whether the architect belongs to one faction or the other, there are certain factors connected with daylighting by windows that he should know and constantly keep in mind:

1. The size of classrooms is practically standardized at about 29 ft. long, 24 ft. wide, with 11 ft. 3 in. ceilings. (This is the standard in Ohio and is fairly typical.)



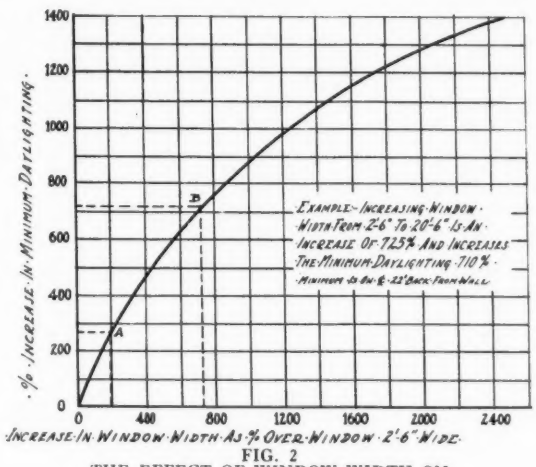


FIG. 2
THE EFFECT OF WINDOW WIDTH ON MINIMUM DAYLIGHTING

2. The value of the daylight admitted to a room of the dimensions given is tremendously affected by the design of windows.

3. The architect is in control of the three main characteristics of window design, namely: the window height; the window width; the width of piers, walls, or mullions between windows.

School authorities and architects should give careful attention to the relation of these three elements and the effect their variation has on the standard-sized classroom. In such a study, the following information may assist.

The Effect of the Vertical Dimension

In general, the critical point for daylighting is the row of desks farthest from the windows, and if a point midway between the ends of the room on this row is selected as a test station, it will provide a convenient reference point. In a "standard" room, (24 by 29 ft.) this point would be 22 ft. back from the window wall and 14 ft. 6 in. from either end.

Whenever a change of vertical dimension is discussed one point always considered is the effect of lowering the head of the window, but keeping the sill height constant. Of course, this is the same effect as that produced by drawing an opaque window shade down over the upper part of the window.

The effect of this treatment is shown in Figure 1. Begin at the top on the left and follow the curve that is marked "Blocked at Top." It will be noted that lowering the shade or dropping the top of the window 25 per cent will reduce the minimum daylighting at the inside of the room to 57 per cent of its former value. This is a loss of 43 per cent.

On the other hand, raising the sill but keeping the head of the window constant does not affect the minimum daylighting to any such degree. This can be easily seen by starting at the upper left-hand corner of the chart and following the curve marked "Blocked at Bottom." It will be noted that cutting off 25 per cent of the window height by raising the sill reduces the minimum daylight at the side of the room farthest from the windows by only 8 per cent.

These, then, are strong arguments against roller shades fastened at the window head, and they confirm the wisdom shown in many states which require the top of the window to approach the ceiling as closely as possible.

The Effect of the Horizontal Dimension

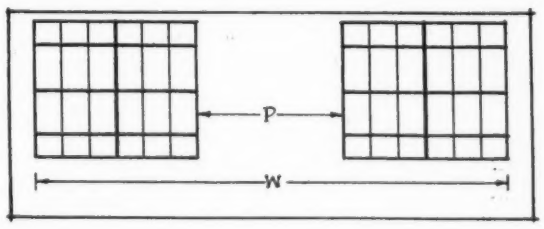
Horizontal dimension or window width, is another factor having an important bearing on daylighting and one which enters actively into the discussion of freedom in architectural design. As the width of a window increases, the daylight also increases, the amount of increase depending upon the conditions involved.

For example, in the "standard" recitation room we have been discussing, if the window width is increased progressively from some size, such as 2 ft. 6 in. wide, the increase in the minimum illumination is greater than the proportionate increase in the window width up to about eight times the original window width. After this value has been reached, any further increase in width is beneficial to the minimum in the back part of the room but in less degree than before.

This is easily seen by referring to Figure 2. It will be noted that increasing the width 200 per cent, which makes the window three times as wide, increases the minimum illumination nearly 275 per cent (A). Increasing the width from 2 ft. 6 in. to 20 ft. 6 in. (B) makes the window about eight times as large, an increase of 720 per cent, but the minimum illumination increases only 710 per cent.

Piers and columns, obstructing daylight as they do, are, nevertheless, points at issue when architectural freedom is discussed. In the modern treatment of buildings where the band or ribbon window is used, these obstructions to adequate daylight do not exist and are, therefore not a problem.

That such areas of blank wall space do considerably reduce the minimum illumination on the inside row of desks can be seen by referring



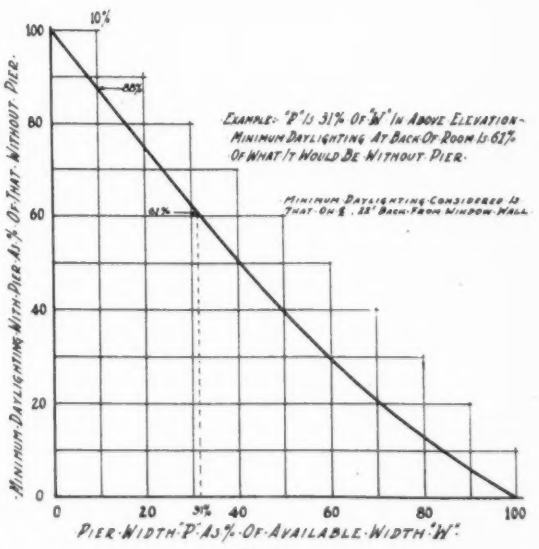


FIG. 3
THE EFFECT OF PIERS ON MINIMUM DAYLIGHTING

to Figure 3, which presents graphically the reduction in minimum daylighting occasioned by piers of various widths.

For example, a pier whose width is but 10 per cent of the over-all width of the window will reduce the minimum illumination by 12 per cent and in every case the reduction in daylighting at the back of the room is in greater proportion than the reduction in available window area.

To summarize: If we assume, that a window area of from 20 per cent to 25 per cent of the

(Concluded on Page 138)

The School-Building Program of Syracuse, N.Y.

Harry P. Smith, Ph. D., Syracuse, New York

Syracuse is a typical American city, largely industrial. Its population in 1930 approximated 210,000. An industrial survey in 1927 revealed that 47 per cent of the population was engaged in manufacturing and industrial pursuits. Fourteen of the sixteen general classifications of the Department of Commerce census of manufacturers were represented. Approximately 80 per cent of the local population is native-born white.

The city was incorporated originally in 1847. Five times since that date significant territorial additions have been made. The average decade increase since 1850 has been 34.7 per cent. Since 1890, however, it has been 25 per cent, and all indications point to a further substantial increase during the next decade.

The public-school building situation was not essentially different from those found in cities growing similarly by internal increases and external additions where no systematic plan has been formulated as a result of a careful study of all factors. The older elementary-school buildings had been erected as "ward schools" in the truest sense of that term. One academic high school had developed into two, and a vocational high school had been added prior to 1910.

During 1924 two junior high schools were erected. One of these, however, soon became a six-year secondary school due to the demand for high-school facilities in a rapidly developing section somewhat removed from the existing plants. Extensive annexations in 1927 added two other high schools in outlying sections. Both of these were six-year secondary-school units.

Over a considerable period of time the city had been replacing the older elementary-school units with modern fireproof structures, always on the old sites which were small. Other units to serve newly developing districts were erected on spacious acreages. So well, in fact, had the elementary-school situation been handled that in 1930, not a structure, or even a portion of a structure, remained that antedated 1890, and only 16 antedated 1900. Practically all of these had been equipped with modern heating, ventilating, sprinkler, toilet, and lavatory systems.

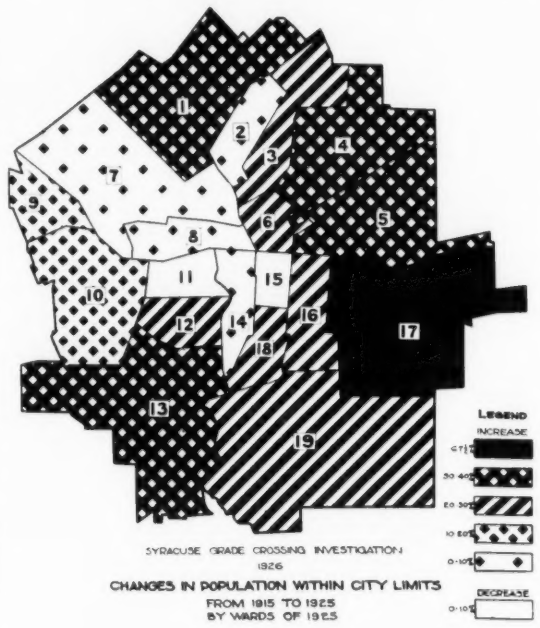


DIAGRAM 1

The growth in population of the city of Syracuse, like that of all American cities, is irregular, depending upon the industrial, business, and residential character of neighborhoods. The older, central sections of the city are losing in population, while certain favorably situated neighborhoods are rapidly growing.

Only 7 scored lower than 500 on the Strayer-Engelhardt School-Building Score Card. The lowest score was 461.

Problems Facing the School Board

Though the city had apparently met its school-plant and equipment problems heroically, yet other serious problems had developed. One of these was the growth of a variety of types of organization due to annexations and to the lack of a consistent organization policy. No less than 10 different types were functioning. They were:

4	-year high schools	3
6	-year junior-senior high schools	3
3	-year junior high schools	1
12	-year elementary–secondary	1
10	-year elementary–secondary	1
9	-year elementary-junior high school	3
8	-year elementary	10
7½	-year elementary	4
7	-year elementary	4
6	-year elementary and lower	17

Such a situation could not be justified. Manifestly if a junior-high-school program was desirable for some, it was imperative for all.

A second problem was the increasing congestion in the upper elementary grades and in the high schools due to the ever-increasing hordes seeking more schooling than previous generations had sought. In 18 years the ratio of high-school registration to total population doubled. Its actual numerical increase was over 300 per cent.

The foregoing facts summarize the situation that existed in 1928. The relatively simple problem of replacing obsolete elementary-school plants had been fairly well solved. The demands for new housing and the increasing elementary-school registration had been adequately met. But the six years of secondary-school work constituted a problem of the first magnitude.

Somewhat earlier the administration and board of education had employed a member of the faculty of Teachers College, Syracuse University, for consultative service. After the earlier service had been performed, the relationship was continued, but enlarged to include research work both in administrative and in instructional problems.

Outlining an Extended School-Building Program

The second major problem attacked by the research department was the outlining of a school-building program for a ten-year period, which would solve the complex problems that confronted the city in its schoolhousing.

In a very true sense this work was a coöperative enterprise. The city had previously appointed a Grade-Crossing Elimination Commission to study and report upon the elimination of the many railway grade crossings in the city. This commission had employed as consultants a nationally known firm of engineers which had studied every ramification of this problem. Many of their data, incidentally, were precisely those needed in an adequate school-building

DIAGRAM 2

The shifts in population and the growth of outlying neighborhoods make it desirable to abandon certain high schools and to relocate others. The above diagram shows that two high schools should be abandoned and two new ones established.

DIAGRAM 3

The junior-high-school situation in Syracuse. Two new junior high schools are proposed for early construction.

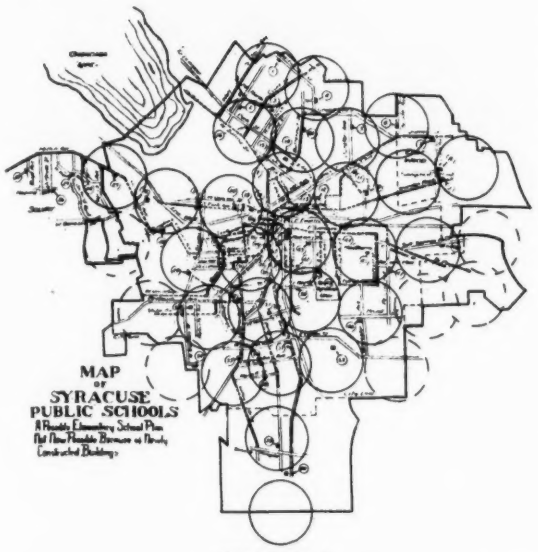


DIAGRAM 4

As in most American cities, there is a great amount of overlapping the elementary-school districts. This is largely the result of a lack of planning in years past. The situation, as illustrated in the present diagram, will be corrected by the proposed ultimate location of elementary schools as suggested in Diagram 5.

survey. At the same time, the Syracuse Chamber of Commerce had conducted an industrial survey of the city. Their report contained many facts pertinent to the schoolhousing problem. In addition, the city had developed the Syracuse City Planning Commission headed by Captain C. E. Howard, which had done noteworthy work in developing a city plan. Finally, the Syracuse Lighting Co., whose manager, Mr. G. I. Vincent, had previously been a member of the board of education, had made extensive studies in connection with the development of their projects. Unfortunately the New York Telephone Co. did not have available at that time the report of its study conducted at the same time the school-building study was being made.

The school-building study attempted to answer the following pertinent questions:

What is the character of the city?
What is, or should be, the organization policy of the board of education?
What are the aims of education in Syracuse?
What is the status of the existing plant?
What are the immediate and ultimate school-building needs of the city?
How are the immediate and ultimate needs to be met?

The Character of the City

Under this division all pertinent facts relating to the population, its growth, distribution, density, shifting, and racial composition were secured. The industries were studied, land additions were noted, and possible future annexations surveyed. Facts relating to changes in types of dwellings were ascertained. Finally, a most careful study was made of all facts relating to school registration and attendance from the earliest published reports of the board of education in 1850, to the year of the study. Parochial-school facts were also included.

Not only were all these facts studied for the city as a whole but they were studied for each section. Diagram 1 shows a situation typical of all growing cities. Some portions are increasing rapidly, while others are stationary, or actually declining.

The Organization Policy of the Board

After a careful review of the functioning of the ten types of organization together with the apparent reasons for their existence, the report recommended that the number be reduced to the three following general types:

3-year senior high schools
3-year junior high schools
6-year elementary schools with kindergartens

For administrative reasons, however, it was recognized that the following types might be utilized:

6-year junior-senior high schools
9-year kindergarten-elementary-junior high schools

At the same time that the types were limited as far as possible to the former, it was recommended that all policies which might encourage any other types be changed. With the foregoing policies definitely adopted, it is possible to proceed with a solution of the difficult secondary-school situation. Without such policies no adequate solution is possible.

Educational Objectives

It was felt that better plans could be evolved both for the program as a whole and for individual units, if the aims of public education at the various levels were kept in mind. Such a statement must precede any systematic planning of educational activities. The determination of the latter must, in turn, precede any adequate planning of space provisions or equipment. Education must here take its cue from industry which proceeds from aims, to activities, to equipment, and personnel.

The Status of the Existing School Plant

The physical plant consisted of an administration building and 50 school buildings, together with 2 others in process of erection, one a new plant and the other a replacement.

These buildings were classified as follows:

Type	*Original Building*	*Additions*
Of fire-resistive construction	24	8
Of fire-resistive construction in walls, corridors, and stairways, but ordinary construction otherwise	4	3
Of fire-resistive walls but ordinary construction otherwise	21	9
Frame construction	1	1
Total	50	21

Some of the buildings in the last two classes were in such condition structurally, and so lacking in those features required for a modern program of education, that early replacement was deemed necessary.

All of the older buildings and many of the new ones were scored by means of the Strayer-Engelhardt School-Building Score Card. As a result, ten were recommended for replacement during the ten-year period covered by the program and others for remodeling. These were all elementary-school buildings. The junior and senior-high-school plants were all of recent or modern construction. (Since the report was prepared, two of the structures have been replaced, and a third is listed for replacement in 1931, leaving but seven for future replacement.)

The Ultimate School Plant

Senior High Schools. The comprehensive type of high school was recommended for future development, though no change was proposed in the existing vocational high school where highly specialized trade and industrial courses are given. Such a policy assures to every child a broad high-school curriculum, without the handicap of a long-distance travel unless he wishes a relatively high type of specialization in trade and industrial work.

DIAGRAM 5

A possible elementary-school plan as suggested by the Syracuse School-Building Survey. This recommended plan is not at present possible because of the heavy expense which would be involved in abandoning buildings. It will be ultimately corrected.

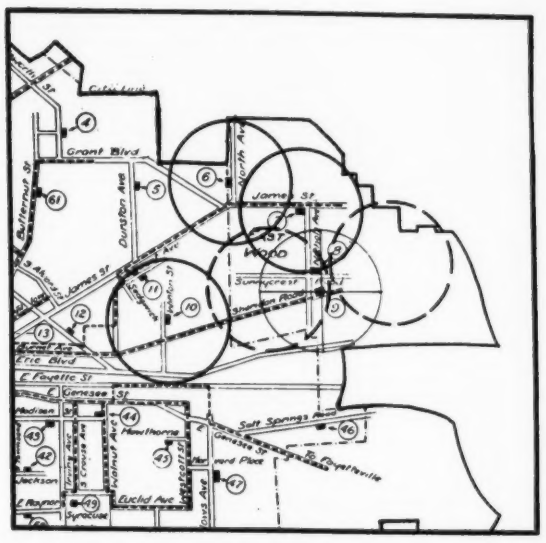


DIAGRAM 6

A special school situation in the northwest section of Syracuse, which is growing very rapidly.

The forecasts indicated a senior-high-school registration of approximately 8,000 by 1940. To house these adequately, the following program was set up:

First Step, 1929–1934

	Capacity
Erect an addition to Eastwood High School (now under construction)	600
Erect a cosmopolitan senior high school in East Genesee Street Section	1,000
Erect an addition to Onondaga Valley High School	400
Total capacity by 1935 inclusive of present facilities without Nottingham Junior High School estimated at	7,250

Second Step, 1935–1940

New cosmopolitan high school in northeast section of the city to replace Eastwood High School which would then become a junior high school	1,200
Additions when necessary to East Genesee Street, North or Onondaga Valley high-school plants	300
Capacity by 1940 including plant existing in 1935	8,150

Diagram 2 shows the districting of the city for high schools using circles having diameters of three miles, thus dividing the city into districts large enough to support a high school sufficiently large to be relatively economical, and yet providing high-school facilities for every section.

From time to time there has been agitation for a new high school in the west section of the city, but a careful analysis of the factors involved clearly indicated that until a substantial territorial addition is made in that section, such a building cannot be justified.

The program laid out here gives the city no more than six senior high schools, but they will be adequate to the needs as anticipated, and well located.

Junior High Schools. The most difficult problem was encountered at this point. Before any adequate solution could be planned, a definite organization policy was imperative. Such a policy was recommended as indicated above.

The present junior-high-school plant includes:

	Capacity
Nottingham (to be used for junior high school exclusively)	1,025
Roosevelt	1,150
Lincoln (junior-high-school division)	400
Putnam	500
Porter (junior-high-school division)	600
Madison (junior-high-school division)	400
Bellevue Heights (junior-high-school division)	300
Eastwood (junior-high-school division)	350
Onondaga Valley (junior-high-school division)	325
	5,050

The program proposed is based on a predicted junior-high-school registration by 1940 of 9,000 pupils.

New junior high school in north section of the city (now authorized)	1,200

(Continued on Page 140)

THE AMERICAN
School Board Journal
EDITORS:
WM. GEO. BRUCE WM. C. BRUCE

The Alarmist in the Field of Education

PERIODICALLY someone rises to awaken a complacent public to the thought that the educational interests of the nation are facing a crisis. When during the world war thousands of teachers left their profession to go into more lucrative occupations, the cry was raised that the country was drifting into teacherless schools.

Yet not a single school was closed for the lack of adequate teacher talent. The cry of crisis went up vociferously, and was resounded from ocean to ocean, only to be followed in a few years by the greatest teacher surplus the country has ever experienced. Young men and women, impressed with the cry of alarm, flocked into the teaching profession only to find that there had never been an acute shortage.

Once more somebody predicts calamity. The economic depression has prompted school administrators everywhere to exercise greater circumspection in budgetmaking. In isolated cases a reduced tax income has suggested retrenchments that may impair efficiency. And yet these cases are local and in nowise include the great rank and file of urban and rural-school systems throughout the country. But the alarmist is once more on the job. Here is what a prominent educator recently said:

"At no time for many years have the American schools faced a crisis such as they face today. In one state it is seriously proposed to close the doors of every school for a year. Another state has just voted away the fundamental tax provision for schools without substituting any other means of support.

"It is proposed in other places to reduce the length of the school term; classes are being increased in size until they cannot be handled effectively; appropriations for teaching and equipment are being reduced — the services of the schools weakened."

Evidently such extravagant language here and there finds credence. For instance, a southern editor, who takes this outburst to heart, seriously asks: "What is wrong? Why is public support of its school system, so long the chief pride of the country, weakening? Last year the country spent more than two and a half billion dollars on its public schools. They have voted one bond issue after another for better buildings and equipment. Men have paid their school taxes not only cheerfully, but enthusiastically. Why has their ardor cooled?"

The answer is that there is nothing wrong, that the public is as loyal as ever to its school interests and that the expenditures for the maintenance of the public schools will continue as generously in the future as they have in the past. It is true that in some instances contemplated expansion of the school service will have to be postponed for a year or two, but here there is no thought of crippling the schools. There will be no lessening of the zeal of school administrators and no impairment of the excellence of the schools themselves.

There were school districts in various parts of the country, even before the economic slump set in, that complained of a shortage of funds. School administrators have for several years sought ways and means of securing a better school support, and a more equitable distribution of state school funds. The shortening of school terms, doubling of school classes, and elimination of building projects is nothing new. These things have happened during periods when the nation was at the height of prosperity, and will continue to happen in the future.

The question is whether there is legitimate cause for the alarm, which overzealous schoolmasters are sounding. The answer is that the American people possess the financial ability, the progressive spirit, and the courage to keep their schools upon a high level of efficiency. The country as a whole is economically sound, inherently enterprising, and optimistic, and conscious of the importance of training its youth in times of depression as well as in times of prosperity.

The schools will go on with the same enthusiasm, comprehensiveness, and efficiency that has always characterized them. They constitute the essence of the American spirit which never flinches, never yields, never surrenders.

Transient Character of American Schoolworkers

THE transient character of the schoolworkers in the United States, more specially as applied to those employed in the smaller communities, is frequently deplored. It has been traditional in many communities that the teacher, principal, or superintendent who has served a year in one community will not come back the next.

"When shall I move? This is the question which comes to most teachers," says J. Elmer Morgan, of the National Education Association. "In those sections of the country which follow the absurd plan of electing teachers from year to year it comes as an annual strain and uncertainty, and is a serious drain upon the most effective teaching. No teacher can do his best whose interest does not root deep in the lives of individual children and of the community. There is truth in the old adage, 'A rolling stone gathers no moss.' And when in doubt it is safer to stay than to go elsewhere. There is a tremendous loss of energy in adjusting oneself to new conditions. School boards and the public are likely to take the teacher at his own valuation, and if he looks upon his service as an incidental matter of such little importance that he may move about lightly, the community is likely to accept that view. If he really counts in the lives of individual children and in the civic, intellectual, and moral life of the community, he will not lightly leave a task unfinished."

The inference given here is that the school authorities may be to blame for the frequent changes in the teacher personnel. Teachers are hired from year to year, it is true, but it does not follow that the school authorities desire a change any more than does the teacher. The point is made that the teacher should render himself so valuable that the community would not want to lose him. In other words, a strong professional spirit should prompt him to enter deeper into his task and remain longer on the job.

The fact is that intinerancy is a peculiar characteristic of American school life, particularly emphasized in the rural districts. The restless spirit, love for change of scene, the ambition for a wider field of service and for better compensation, prompt the schoolworker to move on. It causes a migration from the lone rural district to the village, from the village to the city, from the smaller to the larger communities.

And here we may well ask ourselves whether this restless spirit, these changes in the school personnel are entirely bad. There is such a thing as to remain in one place quite too long. The writer has visited schools in England and Germany where the teacher never changes unless disability calls him away. Stagnation plainly sets in where men or women are held in the same surroundings year after year with no prospect of promotion or a better day.

The come and go in American school life is not altogether bad. It is true, "a rolling stone gathers no moss." But it is equally true that a new broom may sweep cleaner than one worn down to the handle. The new teacher recruit may bring into play new ambition, new ideas, new zest — all of which redound to the benefit of the pupil constituency.

In the industrial field the so-called "turnover," namely, the frequent changes in the working forces, is regarded as an impairment of the production efficiency. In the field of education this is to some extent likewise true, and yet it would seem that there are compensating considerations which may apply to the one and not the other. The introduction of new faces, new ideas, and new methods into the classroom is not without value.

The American spirit implies restlessness, a love for change of scene, a longing for better conditions, and for wider vistas of human activity. The workers in the field of popular education express that spirit in their intinerant tendencies, in their migratory movement from rural to urban centers, and for wider fields of service. They are intensely American in outlook and action.

Some Backward Steps in School Administration

A MOTION was recently submitted to the city council of Detroit which seeks a legislative act whereby the financial operations of the board of education of that city are to be subject to aldermanic control. The charge is made that the board of education "bandies huge

sums of money and increases the public debt by condemning property which is unnecessary, without consulting the council."

In the light of the fact that during the past two decades there has been a gradual elimination of city council domination in order to enable the boards of education to render a proper service to the cause of popular education, the Detroit proposal must be regarded in the nature of a backward step.

The school system of Detroit enjoys a reputation throughout the country which is exceptionally high. The board of education of that city has demonstrated its efficiency by manning the school system with most eminent experts and leaders. In the field of city school administration Detroit takes first rank, and its educational leaders command the confidence and admiration of their contemporaries everywhere.

As to the financial policies of the Detroit board of education those at a distance cannot judge. The fact, however, that the board has succeeded in rearing a highly efficient school system does not necessarily argue that gross extravagance has been engaged. A city school system built upon modern and progressive lines costs money. Detroit's prestige as a great American population center has been enhanced through its contribution to the cause of popular education, and its people have been the gainer a hundredfold.

It would be presumptuous on our part to attempt to determine the merits of the immediate conflict between the Detroit board of education and the city council. Whether in a single instance one or the other is right or wrong is of minor importance as against the larger issue involved.

A board of education intrusted with the maintenance, management, and operation of a school system, familiar with its problems and manifold needs, is more competent to determine upon the wisdom of this or that expenditure than any city council can possibly be. A city council, realizing the various demands of a municipality, may know what proportion of the public funds can consistently be assigned to education, but it is not the most competent body to determine the nature of expenditures for school purposes. That must be left to the board of education.

The Unethical in the School Architectural Service

WITH the progress of time, new problems present themselves and new solutions are found. This seems to apply for the moment with particular force to the field of school architecture. With the tremendous strides effected in recent years, not only the forms of expression which the modern schoolhouse has assumed, but also with the changed preliminaries leading to accomplishment, new situations, new difficulties, and hitherto unseen evils are encountered.

Let us be more explicit. The educational expert has come upon the scene. As a rule he is an educator, sometimes a former superintendent, who possesses a grasp of the schoolhouse essentials. He goes into a community and makes the preliminary studies upon which the architect evolves his plans. Theoretically the idea of securing the services of a schoolmaster to help the board of education in devising a building program is commendable. In practice, the scheme presents some drawbacks.

At least, situations have come to light which demonstrate that some of the schoolmasters so employed have not remained within the scope of the task assigned to them. Cases have arisen where the educational expert has been little more than a good salesman for the architect and where his survey has been rather a flimsy and superficial matter.

In some instances, too, local superintendents who have outlined the kind of schoolhouses needed have assumed that they have served the architect rather than the community, and have looked to the latter for an extra compensation.

It follows that the superintendent regularly employed and compensated by a board of education, cannot consistently ask or accept a stipend from an architect. If he has outlined, in the light of the instructional service to be rendered, the kind of schoolhouse that is needed, he has performed a duty which comes well within his province as an educational expert. That is one of the duties for which he is hired and paid for by the school system.

There is another phase in the relationship of the educational expert and the architect that deserves attention. It deals with the question of final authority in the planning and construction of a schoolhouse. Who shall boss the job? Is it the educational expert? Certainly not. His function, particularly as to the preliminaries, is advisory only. The decision must lie with the board of education. That body must finally determine the nature of the structure, harmonize the recommendations of the educational expert with the professional concepts of the architect, and exercise watchful care in the execution of the project.

In touching upon some of the situations which have arisen, in the relations between the educational and architectural factors, suffice it to say that architectural firms of high standing have had cause for complaint and have in instances been hindered rather than helped toward the rearing of utilitarian structures. On the other hand, it remains that these abuses are exceptional, and that, in the main, the school superintendent will not lend himself either to illogical contacts or unethical methods.

School Officials as Public Speakers

THE school official who can espouse the cause of popular education in an attractive and convincing manner renders a distinctive public service. Here we have not in mind the distinguished educator who appears at professional gatherings, but rather the local school official who pleads the cause of the school before community gatherings.

In recent years there has been a gratifying increase in the number of school officials who are called upon to address clubs, societies, and social gatherings to discuss problems affecting the schools. The news columns of the press constantly note the appearance of superintendents, principals, or board-of-education members before Rotary, Kiwanis, Lions, Optimist, and other service clubs.

They usually have something worth while to say, command the attention of their audiences, and leave an excellent impression behind. The schoolmaster not only discusses the aims and purposes of the schools as such, but also contributes something in the way of a discussion on higher and finer objectives of American education. The press and the public receive these observations with favor and manifest a kindly and coöperative attitude. The schools belong to the public, and it is therefore deemed quite natural that those in charge of them should tell the public something about their operation, maintenance and progress.

In recent years the president and members of the board of education, in both large and small centers of population, have come to the fore in increasing numbers as public speakers on school-administrative problems. It is to be noted that they usually acquit themselves with credit to the interests they conserve. They have managed to convey to their audiences something of the real duties that attach to the school-administrative service and of the needs that must constantly be met.

The beneficent results which school officials accomplish by thus taking the public into their confidence is particularly attested when the question of financial support is submitted to a popular vote. Open, frank, and heart-to-heart discussions, too, have the tendency to inspire confidence in those who manage the schools and expend the public funds.

It follows, however, that those called upon to address public audiences on school questions should prepare for the occasion. The man who is overconfident as to his ability in the way of impromptu speaking sometimes experiences an embarrassing failure. Whatever the occasion, it is well to prepare for the same, and present the case lucidly, attractively, and convincingly. The cause at all times is worth the effort.

Do everything you can to improve the schools, not so much by way of criticism of what is bad, as by praising what is good. Make other schools and those interested in education see their deficiencies by comparison with the good school. — *J. E. Gregg.*

No school is more necessary to children than patience, because either the will must be broken in childhood, or the heart in old age. — *Richter.*

Pedantry crams our heads with learned lumber and takes out our brains to make room for it. — *Colton.*

Man is arrogant in proportion to his ignorance; man's natural tendency is to egotism; man, in his infancy of knowledge, thinks that all creation was formed for him. — *Bulwer.*

The bulk of mankind are mere imitators of very poor originals. — *H. W. Shaw.*

The effectiveness of a teacher's work will be readily shown in the extent to which he inspires his pupils' ambition to pride in labor and to appreciation of the better things of life.

Seven Vital Studies of the National Survey of the Education of Teachers

E. S. Evenden, Associate Director, National Survey of the Education of Teachers
Professor of Education, Teachers College, Columbia University

What are some of the chief studies being made in connection with the National Survey of the Education of Teachers which has been undertaken by the Office of Education, United States Department of the Interior?

Following are seven of unusual interest. Some of the data for the studies will be obtained from the inquiry form that has recently been sent to all the teachers in the United States. Supplementary information will be obtained from other sources.

The Supply of Teachers

1. A survey especially directed toward presenting figures on the supply and demand of teachers in all types of work in the public schools has been made one of the major projects for the first year's work. The blank for this was carefully prepared in order to secure as much material in usable form as possible with the limited means at our disposal. This blank has been sent through the coöperation of state departments and city superintendents to all teachers, supervisors, administrative officers, and other professional workers in the public-school systems of all states. In the questions asked in this blank it was planned to secure at least three items of distinct concern to this organization:

In the first place, questions have been asked which will show the types of educational institutions from which the teachers secure their training. In this connection it will be known whether they were prepared in high schools, in junior colleges, in normal schools of teachers' colleges, or in liberal-arts colleges or universities, and also the combinations of these.

In the second place, all teachers have been asked the number of semester hours of work received in education, educational psychology, methods, etc., and, in the third place, the number of semester hours of practice teaching. These questions were inserted in an attempt to secure some additional light upon the points raised in the Flickinger report. In this report Dr. Flickinger quotes the statement that the following opinions were "current among members of the faculties of colleges of arts and science and professional colleges other than colleges of education"; "that the importance of professional courses in 'education,' especially courses in 'methods,' is overrated and that prospective teachers are required to devote too much time to this phase of their preparation . . . that the emphasis placed upon training in methods and other professional 'educational' courses, in spite of the fact that legal requirements have been in force for some time, has not improved the teaching in secondary schools."[1] He also stated that "one of the oldest and best-known institutions in the country has never had a department of education, and therefore its students have never taken a single course in that subject. Yet hundreds, perhaps even thousands of its graduates are actually engaged in teaching throughout the nation. Is it notorious that these men are less successful in the classroom than their colleagues from other institutions? And if so, can this fact be objectively demonstrated?" The report also contains the following list of challenging statements:

"It is no part of the normal function of this Association to pass judgment upon the respective merits of the academic subjects pursued by its members. What is being done in this instance is altogether due to the activities of the friends of Education in an effort to impose these requirements upon college and university teachers. Even so, this report is not intended as a challenge of the value of work in Education for certain purposes and when properly given (as is often the case) nor as a deterrent to anyone's taking as many professional courses as he desires. But to impose upon every teacher a large amount of such work (which also has a constant tendency to increase), regardless of its content value or the manner in which it may be taught is an entirely different matter. The requirements on the secondary level were never imposed by the consent of the governed (i.e., the teachers themselves) nor by the wish of college or university faculties (apart from the professors of Education). On the university level this control has less influence, and the requirements cannot be extended there except by persuading the academic faculties themselves of its wisdom. This committee and, it believes, the great majority of college and university teachers are willing to follow wherever the evidence may lead, but they demand the evidence; and it must be of a character so objective that he who runs may read. Nothing short of that will suffice. At present university faculties are convinced that the defects of college and university teaching are often exaggerated and that such as exist are due to causes[2] which would not be greatly affected by the taking of courses in Education."

While it will be, of course, utterly impossible "objectively" to demonstrate the effect of education upon the work of teachers from the facts gathered upon this data blank, it will be possible to give a very much more accurate picture of the situation than has ever before been obtained, both with regard to the amount of education and practice teaching which teachers have secured and also with respect to the types of institutions in which that work was obtained. This data sheet will also supply information concerning the number of subjects taught and a rough measure at least of the amount of undergraduate and graduate work which the teachers in secondary schools had in the subject they are now teaching.

The Curricula of Teacher-Training Schools

2. In the second place it is expected to make careful, analytical studies of the curricula for the professional preparation of teachers in normal schools and teachers' colleges and in liberal-arts colleges and universities. These analyses will involve the curricula for preparing teachers for different types of work and for different levels of schoolwork. They will also include work on the graduate level for teachers and for the preparation of the faculties of teacher-training institutions. These analytical studies will compare the so-called professional schools for the preparation of teachers with the more general-arts college and undergraduate college of universities on such matters as: the organization of courses on junior and senior college levels; the prescribed courses in different curricula with the prescriptions common to all courses; any required sequences in courses in different fields; the amount of work required of students majoring in different subjects; and the requirements for graduation. In addition to these analyses based upon catalog statements and other direct inquiries more intensive studies will be made of selected representative institutions in each group in order to secure if possible a more accurate description of better practices. The studies proposed in connection with this part of the survey will, among other things, show the varying amounts of education, psychology, practice teaching, and other such courses which are supposed to be emphasized more strongly in one group of schools than in the other. The extent of this difference in emphasis should be more accurately known as a result of this study than is true at the present time. These curricular studies are being organized at present and will be under the immediate supervision of Dr. Earle U. Rugg, head of the Department of Education at Greeley State Teachers College, and by Dr. W. E. Peik of the School of Education, University of Minnesota.

Rating Scales

3. The third phase of this study directly concerned with the work of education has to do with the attempt to assemble or develop more effective rating scales and proficiency tests for teachers, since so many of the controversial issues which will need to be studied in connection with this survey sooner or later come to the point where we should be able to say that the product of one type of preparation does better work or equally satisfactory work or less satisfactory work than the product of another type of preparation. In order to do this, more reliable measures than are now available are needed.

Quality of Students in Teacher Training

4. Attempts from as many different angles as possible without an actual study of all students now in higher education are to be made to determine the variations in quality of students now preparing to be teachers in teachers' colleges, colleges and universities. Various claims and counterclaims are now made concerning the intellectual ability and the social and economic background of students in different types of institutions. The extent to which these claims are justified at the present time will be of material assistance in the construction of professional curricula for teachers. In this connection it is hoped to repeat the study made in 1915 by Pres. L. D. Coffman and with this and other comparisons that can be made for different periods of time to show the direction of improvement and also the amounts of improvement in the quality of students now being admitted to teacher-training courses.

The Faculties of Teacher-Training Institutions

5. A study similar in intent and purposes is being started with respect to comparison of the faculties of these different institutions. This study will be carried to more detail than the student-body study, but because of the expense and numbers involved it is probable that a sampling of institutions will be resorted to. On the basis of data so obtained comparisons of the relative educational and professional equipment of staff members in different groups of institutions can be made. Not only can these comparisons be made between institutions but also between instructional groups within the same institution.

Certification Standards

6. A very detailed study is being made in coöperation with the Committee on the Social and Economic Status of the Teacher of the N. E. A. of which Dr. R. B. Buckingham is chairman. The study is being conducted by Mr. Hubbard of the research staff of the N. E. A., and has involved a personal study of certification standards and practices in practically every state in the Union. The types of restrictions that are imposed by different certification laws and the effect of these restrictions upon the amount and kind of required courses in education will be shown.

(Concluded on Page 72)

[1] A.A.U.P. Bulletin, XV, 1929, 559.

[2] Such as the fact that for obvious reasons the profession of teaching is no longer attractive enough to enlist the best men and that the average of studentship has deteriorated — a situation for which many hold the educational authorities themselves at least partly responsible.

(Concluded from Page 70)

In-Service Training

7. It is planned to organize a detailed study of present in-service training programs for teachers. This will involve the types of institutions offering them, the nature of the courses offered, the possibilities of larger units and sequences of instruction under these conditions and the percentage of amount of work given in the fields of education and applied psychology to teachers in service. This study is to be guided by Dr. Ned H. Dearborn.

Not all of the questions listed in this discussion are being directly attacked at the present time. Several of the studies now under way will supply some information on more than one of those educational problems. It is both possible and probable that other studies will be organized either as coöperative studies or as central-staff studies which will bear upon others. The consciousness of the existence of these problems serves to guide the thinking and the proposals of those working on this survey in directions which will tend to throw additional light upon the controversial issues.

Since the survey has been under way only a little more than half a year it is too soon to predict just how many of these hoped-for results which will be of such immediate interest to teachers of education in higher educational institutions in this country will actually materialize. As the survey progresses there will undoubtedly be numerous revisions with further concentration upon some of the problems and the decision to give up others for the time being, which because of the limit of time and money could not be satisfactorily done as part of this survey.

Is She Experienced?

Emily Guiwits

Secretary Brown, of Dotville, took down his telephone receiver. "Get me James H. White, of Dashville, please. No, I don't know his number. He's secretary of the school board — let the Dashville operator find him."

Presently the telephone rang. "Hello, White! This is Brown at Dotville. I see you've a case in our court here tomorrow. Have lunch with me, can't you? I'd like to have a chat with you. Fine! Give me a ring when you're through, and I'll meet you at the Carlton. Eating's pretty good there."

Following lunch the next day each man lighted his cigar and pushed back his chair. Secretary White looked at Secretary Brown and said, "I see you've something on your mind. Shoot!"

"It's this blamed business of hiring teachers! You've been on the school board for years — how much do you stress experience? If you hire a beginner, how do you pick a winner?"

"Two mighty hard questions to answer! Dotville and Dashville are about the same type of school and pay about the same salaries. We're average for towns of our size: no special problems or special advantages. Buildings fairly adequate; teachers can find decent places to live. We pay just fair salaries and want superior teachers. How to pick them I'll admit is a question."

"Of course, it runs back to the principle of supply and demand," said Secretary Brown. "Just as surely as when you buy bacon or sugar. The supply of teachers this year is ahead of demand, and those with goods to sell are cutting rates. But at that, how do you know an experienced teacher at twelve hundred dollars is a better buy than a choice beginner at the same salary?"

"That's something you can't know," answered Secretary White. "You have to settle each case on its merits. When an experienced teacher comes along crazy for the job, I begin to wonder why. She may have papers that would elect her to Congress; training, discipline, and ability to put across her subject all stressed. If this is all, why is she so anxious? Even this year such teachers are none too numerous. So I inquire around a little to see what the 'outs' are. Sometimes she runs around with high-school boys; maybe she's a born trouble-maker; possibly it's her use of English; perhaps she doesn't work well under supervision. There's always a reason for things; a board's job is to dig out that reason."

"With a beginner one runs a risk on all those points," said Secretary Brown. "Still, one can look up a girl's college record, and even better, her hometown record. I count a lot on background. Give me health, brains, natural refinement plus good early training, then add college training, and you have something to build on — if she's the true teacher-type — and that gives us about one in ten going out from teachers' colleges."

"But don't ignore this point," warned Secretary White. "Not every superintendent has the knack of developing a beginner. Some pretty good men won't trouble to guide a youngster during the first few weeks. They say 'The board hired her, they pay her a salary, why should I earn it for her?' Such men should have only experienced teachers under them."

"You're describing our man Jim Smith," said Secretary Brown. "And Thompson, our treasurer, you know, is fanatical on the subject. First

(Concluded on Page 74)

"No wonder she's so keen on school!"

MOST teachers have listened to these exclamations of surprise. The older generation finds much that is new and unexpected in modern educational methods—a new sympathy in the teacher's attitude and a new cheerfulness in the classroom.

Attractive Sealex Floors are playing an important contributory role in "cheering up" the school. For the lower grades, we create floors (and "finger-proof" wainscoting also) in cut-to-order patterns that may feature picture book designs, alphabets, geometric figures or game markers. For corridors and classrooms used by more advanced grades we recommend Sealex Veltone, Jaspé, or Battleship Linoleum.

These Sealex materials contribute more than color and brightness to the classroom. Teachers have found that their noise-absorbing quality helps to maintain concentration. There are no splinters—no yawning cracks to harbor dust and germs. Unlike other floors, Sealex floorings do not require constant painting and refinishing to prevent them from becoming an actual *source* of dust.

When Sealex materials are installed by Authorized Contractors of Bonded Floors, we back them with a Guaranty Bond. Our School Floors Department will gladly give you full information.

CONGOLEUM-NAIRN INC. KEARNY, N. J.

SEALEX
LINOLEUM FLOORS

(Concluded from Page 72)

thing when a name is proposed he yips up 'Is she experienced?' someone mentioned that these youngsters have to get experience somewhere, and he came back, 'So does a surgeon, but I don't want him to get it on me!' "

"Odd how different namesakes can be," mused Secretary White. "Our man Dick Smith is the best I ever saw with beginnners. Give him good material and he'll ease her along till she gets her balance, then we profit from it for several years to come. And really the highest compliment one can pay a schoolman is to say he's good with beginners. My niece in Meadville is ready for a job, and I'd ask nothing better than that she might draw a superintendent like Dick Smith. If I weren't on the board I'd have her in Dashville. Smith backs up his teachers to the last notch; he gives credit where credit is due and sometimes a little more. I tell Susan that the type of man she works under her first year counts more than a hundred dollars salary."

"We had a man two years ago just the opposite from yours," said Secretary Smith. "He took all the credit and shied away from all the blame. He aimed to be popular at all costs. Well, he carried it a bit too far, and the cost was his job. But the whole thing's a mere guessing match."

"No — not quite that bad," objected Secretary White. "And don't forget that this proposi- is six of one and half a dozen of the other. We demand perfection from teachers, but we have far from perfection to offer. We don't expect perfection elsewhere — why demand it in the schoolroom? These young teachers are human beings, same as our hometown boys and girls. If a high average at home, they're likely to be the same in Dotville and Dashville. That's what I look for — high average on all counts wherever they are. Get a line on their home reputations. If that's good and nothing has happened to tarnish it since, give the beginner a chance! Well, I must go back to the courthouse."

"I believe you're right," agreed Secretary Brown. "Anyway we'll give it a try. Glad to have had this talk. See you again soon."

What the Public Wants to Know

Supt. C. V. Compton, McCamey, Texas

A school superintendent who is keeping the city with him educationally is forced to do much publicity work. The idea that the superintendent shall publish an annual report at the close of the school year and file it away in his office after sending a copy to the state department of education and a few copies to leading colleges, is at present practically worthless. The citizens of today want readable school facts immediately after they occur.

The public schools can no longer obtain tax money without letting the public know what the money is being spent for. The times demand short, "newsy" accounts of different phases of school activities. All articles going into the annual report, except a few statistics, should be printed in the local papers in as interesting and as readable form as the superintendent can prepare them. At the close of the school year the more formal annual report can be compiled with some additions from the news articles printed in the local papers.

A live superintendent is always surveying his schools, checking up on their work, finding out the good in his school systems, and occasionally discovering a few weak "spokes" which should be removed and replaced. In the survey of his school system the question is often asked: What facts should be dealt with, what fields should be explored? Both fields of surveying and publicity can be adequately dealt with in one study. A self-survey when well done will be the annual report, except for the summary of the year's work.

Articles interestingly written, printed weekly in the local paper, preferably the Sunday edition, describing what is taking place in the school system, create a favorable public opinion under the most critical circumstances. The facts which the citizens of the community should know either from the survey work of the schools or from the so-called annual report fall under one or other of the following heads and subheads:

Facts Which Citizens Would Like to Know About Their Schools

School Finance

1. How does the school get its money?
2. How is the school dollar distributed among the various school departments?
3. Why has school cost risen enormously in the past ten years?
4. Are the schools conducted economically?
5. How does the cost compare with other comparable cities in current expenses, capital outlay per child, etc.

Child Accounting

1. Are the children making normal progress through school?
2. What per cent of the pupils withdraw from school, cause of withdrawals compared with other cities.

(Concluded on Page 76)

Perfected School Supervision Through Strowger P-A-X

Providing rapid, reliable, dial-controlled interior communication, Strowger P-A-X enables the principal properly to supervise and to keep himself informed of the activities of every person in his organization. It is thus—and principals of several hundred schools, all over the country, have found this true—the finest of all aids to effective school supervision.

A booklet describing the use of Strowger P-A-X in schools, and outlining the many types available, has been prepared by the Strowger engineers. Your copy will be gladly sent upon request. School officials and architects will find our representatives eager to assist in the planning of a suitable telephone layout for any school—existing or planned. Write or telephone our nearest sales office.

STROWGER AUTOMATIC DIAL SYSTEMS

Automatic Electric Inc.

Factory and General Offices
1033 W. Van Buren St., Chicago

Sales and Service Offices in Atlanta, Boston, Cincinnati, Cleveland, Detroit, Kansas City, Los Angeles, New York, Philadelphia, Pittsburgh, St. Paul, Washington

(Concluded from Page 74)

3. What per cent fail to be promoted, how does the per cent of nonpromotion compare with nonpromotion in other comparable cities?

4. What per cent of pupils finish high school, how does the per cent compare with the per cent in other comparable cities?

Instructional Staff

1. Experience, qualification, sex distribution of teachers in comparison with other comparable cities.

2. How are the teachers employed and to what extent is the job open to political influences and favoritism?

3. How do the salaries of teachers compare with the salaries paid in other comparable cities?

4. How efficient is the staff compared with other comparable cities measured by school standing in each?

5. Are there too many supervisors and supervising principals?

Curriculum

1. To what extent is the curriculum meeting the needs of the community? — the needs of boys and girls?

2. What are the requirements for graduation from high school?

3. To what extent are provided extra school activities?

4. What are the subjects offered in the evening school continuation school?

Health

1. Are the buildings properly lighted, well ventilated, scientifically heated, scrupulously sanitary, and located in wholesome atmosphere?

2. Are the children cared for in regard to remedial diseases especially?

3. Is the board exacting as to the health qualifications of the teachers?

4. Are the playgrounds large enough for good wholesome play?

5. Are fire preventers and fire protection adequately cared for?

Building and Building Program

1. Are the buildings up to the standard in floor space, lighting, heating and ventilation?

2. Are the buildings modernly equipped?

3. What new buildings are needed; where located to make the city a modern up-to-date city in school buildings?

4. Has every child of school age (school attendance) a seat in the public school?

5. What is the city's financial capacity to meet its building needs?

Administrative Organization

1. Is the best method of selecting the school board used?

2. What should be the relation in regard to function between the school board and the superintendent?

3. To what is the cause of so many failures in the school due?

4. What are the educational needs of the community?

5. Who should compose the superintendent's staff?

Records and Reports

1. What is the need of so many records and reports?

2. Are the census reports continuous?

3. Are the grades of the children complete and continuous?

4. Are the health reports accurate?

5. Are the attendance officers' reports carefully made out and filed for future reference?

Business Administration

1. Does the city spend its school money wisely?

2. Is the business of the school being handled efficiently?

3. When should a city go in debt for schools?

4. Is a budget made out for the schools?

5. How does the unit cost compare with other comparable cities in instruction, administration, supervision, capital outlay, maintenance, and operation.

Measuring Efficiency of Instruction

1. What per cent of grade pupils enter high school, what per cent are graduated from high school, and what per cent enter college?

2. How do the pupils rank on achievement tests with similar grade pupils in other comparable cities?

3. What is the holding power of the school in comparison with other comparable cities?

4. To what extent do teachers' marks measure accurately the work of the school?

5. To what degree is educational and vocational guidance used in the school?

HIGH-SCHOOL PRINCIPAL'S OFFICE

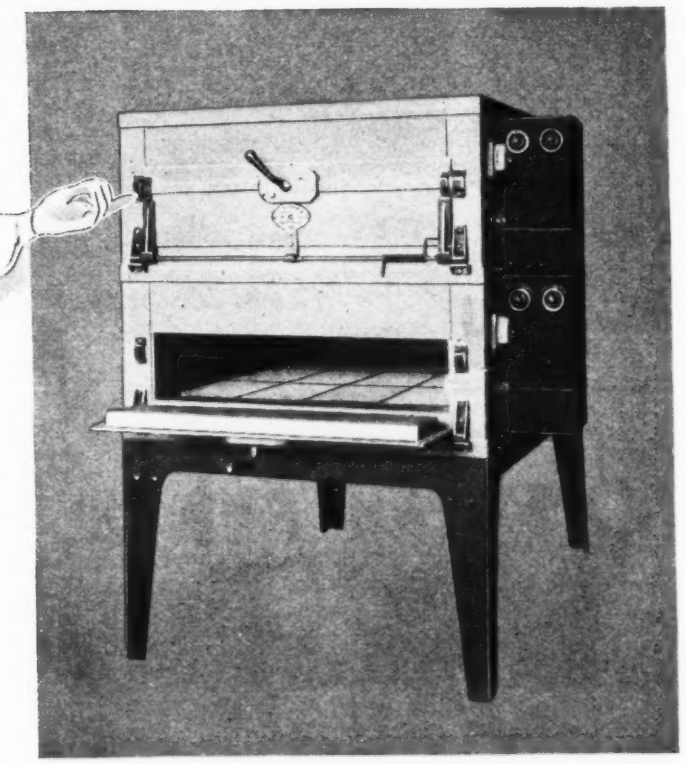
The office of the high-school principal is the most strategic post of the general school situation. Around it all administrative, instructional, and guidance activities of the school cluster. From it emanates not only those plans and policies which guide teachers and pupils in matters involving school routine but also principles and policies which give distinctive character to the work of the school.

The office of the efficient high-school principal must, first of all, be a definite place. It must consist of one or more rooms dedicated specifically for office work. This room must be adequately equipped with such mechanical labor-saving devices and supplied with such clerical assistance as will free the principal as much as possible from clerical and routine matters and secure for him the maximum time in the school day for supervisory and instructional duties. — W. A. Bass, High School Supervisor, Tennessee.

A CORRECTION

A statement in the April issue of the JOURNAL concerning the escape of some four hundred children who marched out of a burning school building at Harrah, Okla., should be corrected to note that 200 of the children escaped from the second floor by the use of the Potter Tubular Fire Escape. These children were unable to use the stairs because of the heat and smoke and not one of them received a scratch in the rapid use of the fire escape.

HOT INSIDE . . . COOL OUTSIDE



Experts recommend Electric Ovens for efficiency and better working conditions. Mail coupon for details.

WESTINGHOUSE Electric Bake Ovens abolish the sickening, strength-sapping heat caused by other methods of baking. They create better working conditions, reduce labor and assure a better product — due to accurate temperature control and uniform distribution of heat.

Clean and compact, these sanitary electric ovens are of the hearth type and built in sections. Each deck is independent of the other and has separate heat control. Thus pastries, meats and bread can be baked in adjacent sections at the same time.

The Safest Equipment Known

Westinghouse Electric Ovens lower fire hazards — caused by oven fires and explosions — and have the enthusiastic approval of the Fire Underwriters. They are especially desirable where space is congested and in locations where large, heavy ovens are unsafe.

Let us prove how economical these ovens are to install and to operate — and how you can duplicate your best results with unfailing regularity. Mail the coupon for details that will be to your advantage.

"Tune in the Westinghouse Program every Sunday evening over KDKA, KYW, WBZ and other stations associated with N. B. C."

Westinghouse

COMMERCIAL COOKING

• EQUIPMENT •

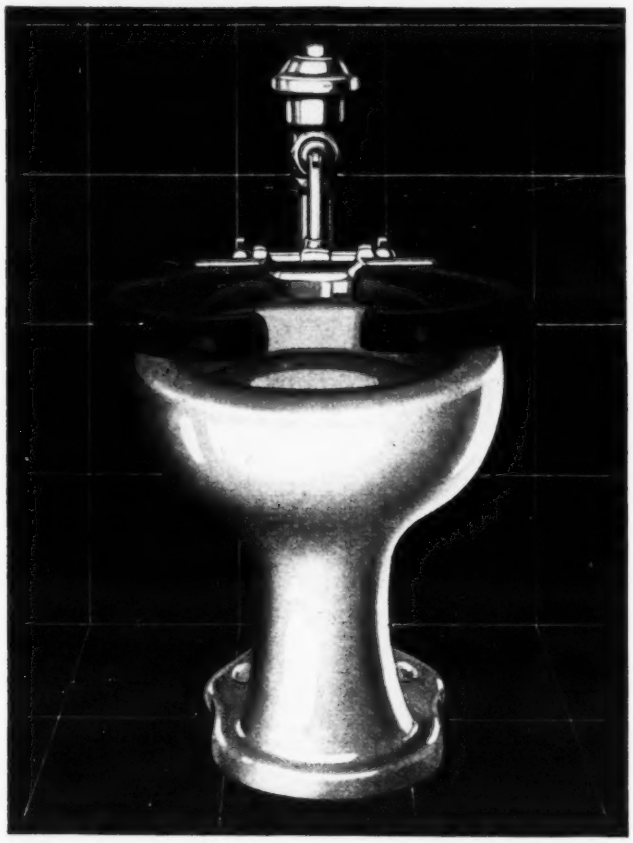
WESTINGHOUSE ELECTRIC & MFG. CO.,
COMMERCIAL COOKING SECTION, DEPT. 205
MANSFIELD, OHIO.

Send illustrated description of Westinghouse Sectional Bake Ovens.

Name.....

Address.....

City.....State.....



The Royal Automatic seat-operating valve delivers a full, positive flush and not one drop more. With this valve no bowl stands unflushed, yet no water is wasted.

Superiority Proved in a Hard School

Convincing evidence of the reliability of Sloan Flush Valves is their widespread use in school buildings where, under extreme conditions of service, they have proved dependable, long-lived and efficient.

This is not surprising, however, when you consider that the Sloan Valve Company has been making flush valves—and flush valves only—for twenty-five years. Rigid adherence to the most exacting quality standards from the very first has brought undisputed leadership in the flush valve field—with Sloan Valves outselling all others combined.

The Sloan line includes hand-operated and automatic seat-operated flush valves, either exposed or concealed. Thus every school requirement is provided for—including floor or wall-outlet closets, urinals and slop sinks. Where maximum water savings are a requisite, valves with a measured flush are available for cold water showers and lavatories.

During 1930 more than 500 of the principal school buildings erected were equipped with Sloan Valves. Inspect any of these installations. It is to your advantage from the standpoint of economy as well as public health.

The experience of Sloan engineers will help you to choose the valve that fits your needs. Offices in all principal cities make this service readily available.

SLOAN VALVE CO • CHICAGO

The Construction of Schools from a Contractor's Point of View[1]

Ira W. Coburn, President, Board of Education, San Francisco, Calif.

Complexity of Building Construction

The construction of buildings is an industry that is very complex, even the simplest building operation bringing together many classes of material and labor. Many crafts are involved; and such a variety of materials as to require much thought in designing, estimating, manufacturing, and erection. The labor of skilled mechanics in every branch enters into the whole construction, and all materials must have arrived at nearly the finished state of production at the factory before delivery to the building site. Hence any modification in the original instruments of service carries with it the cost of the original material in a partial state of completion and full value for the work as revised. Such are some of the elements which make building construction, in general, a highly technical operation.

Referring specifically to school-building construction, I may say at the outset that there is no essential difference between that type of building and any other type of building, except such differences as occur by reason of the specific purpose for which the building is erected.

The Architect

The first point to observe is that the architect plays the most important part in the construction of schools; in fact, upon the efficiency of this service rests the entire burden of school construction. Too often, men are chosen for this service who are not within the ranks of the profession, men who have had inadequate preparation, and who are incompetent to draft and furnish building contractual documents. They do not know how to set forth clearly the entire project, and, hence, leave many loopholes out of which arguments may develop. On the other hand, it is most necessary that instructions to architects should be given in a clear statement of educational appointments. The only way to produce the most economical results to the school board, contractor, and all other parties concerned, is to have a complete architectural service. With adequate service of that kind, one can easily and accurately by modern methods estimate the value of the work in contemplation; and, by so doing, the argumentative points are eliminated, the cost thereby greatly reduced, and a better class of work accomplished. An excerpt from an article in the *Octagon*, the magazine of the American Institute of Architects, by Mr. Emory Hall, of Chicago, will reënforce the thought I have in mind:

"Since building construction is fraught with numerous technical complications not readily anticipated or understood by the layman, and since the owner's and contractor's interest often seems to be diverse, there is need of a competent, experienced, impartial judge to rightly adjudicate and diplomatically adjust matters between them. The competent, impartial architect becomes a safety valve against hazard on the part of both the owner, the contractor, the bond holder, and the public. Since he cannot wisely and successfully perform this function which custom has assigned to him, without extended technical training and large practical experience, it is essential to the public welfare that the state insist on approved competency before an individual is allowed to design a school."

It occurs to me to remark that many architects, who are not professionally to be placed at the top, have, nevertheless, the ability to sell their service; whereas, frequently the thoroughly and scientifically trained architect who understands the fundamentals of designing and who has all the qualifications for planning a building, is not a good salesman.

The Inspector

The progress and time needed for the completion of schools rests in a great measure upon the type of service rendered in the construction by the inspector. Our experiences are that wherever the inspector is well-trained, with some scientific preparation, he is a valuable agent in the speedy completion of the work; but on the other hand, the field-trained man merely selected from the roster of mechanics, and with no technical education or knowledge, spells grief to all parties concerned. He cannot seem to handle the situation. Having a little authority sometimes upsets his equilibrium, and in exercising it he has a tendency to go to extremes. Sometimes, not understanding the contract or its meaning, he attempts to make demands not included under its terms; and on the other hand, fails to insist on the strict observance of the contract. The work naturally slows down, and this is harmful to contractors, school board and the work itself.

Our experience has been that whenever civil engineers, well trained and with field experience, have been placed on work to check between contractors and architects, the most satisfactory results are gained. They understand the technical phases as well as the general intent of contracts, and in many cases are valuable assistants to contractors in carrying out contracts. I could recite many concrete instances to illustrate the point.

Engineers who know their business, as a rule work hand in hand with the contractor's superintendent. They check and assist in laying out the work as it progresses; they know when rivets are properly driven, and cribbing properly erected and set in position. They watch the aggregate of concrete in proper proportion as per specifications, poured and floated in position in the most workmanlike manner. They check size and placement of reinforced steel so as to conform to standard practices in order to get the best results, and the alignment of bolts for the reception of steel columns. They also check all connections and anchors so as to tie in with all various branches of the work, such as plumbing, painting, electric, heating. I think I have shown the tremendous importance

(Concluded on Page 82)

[1]The present article formed the basis of an address before the California Association of School Business Officials, March 14, 1931.

Clearfield's School Adventures

Mark Wright, Member Clearfield School Board

The School Budget

Last year we overran our school budget to the extent of some $3,500. Every member of the board agreed that this expenditure of public funds in excess of the estimated budget was unavoidable for several reasons. In the first place, the budget carried no estimate for emergency items, with the result that, when one of the school heaters broke down, there were no funds in the budget to take care of this emergency bill.

This particular repair bill was unusually exasperating to Sam Jones, our board chairman, since the two members of the subcommittee on repairs had exceeded already the item for repairs by some six hundred dollars. These two members, one an expert carpenter and the other a master painter, had assumed the most essential factors in a good school to be well-varnished desks, new floors here and there, and a new coat of paint for three buildings. Bills for these repair items had furnished a complete surprise to the other members of the board, since no repair or replacement list had been voted by the board as a whole. The repair committee had forgotten apparently that certain items other than new floors and new paint, are essential in a well-organized school. The hiring of expert teachers, and the purchasing of the necessary textbooks and supplies, had seemed to these expert workmen to be of only secondary importance.

Another reason for our failure to keep within our budget last year must be laid to the fact that, as a school board, we had been afraid to ask for increases in several items of the budget. These increases, we knew in a vague way, would be necessary because of the natural growth of our school attendance. But, fearful of the howls of the voters because of another annual budget increase, we decided to try to get by without any increased expenditure.

But this proved a vain hope. For immediately upon the opening of schools in September, we were faced with the necessity of hiring another teacher at the S——— school in order to avoid the placing of 58 fourth-grade pupils in one classroom.

Then, too, this increase in enrollment demanded an increase in supplies beyond our estimate. And to cap the climax, one of our janitors left us. His successor's increased wage raised our deficit by some three hundred dollars.

We asked Mr. Graham, our superintendent of schools, therefore, to suggest a plan of the setting-up of our annual school budget to avoid further deficits. Superintendent Graham submitted the following at our last monthly meeting:

The administration of education cannot be made a money-saving process. The proper administration of the school system today demands the intelligent expenditure of as large an amount of public money as the community can afford for a reasonably effective school system. This expenditure must increase from year to year to meet the added costs of various kinds of service, and to satisfy the public demand for a better type of equipment for the schools.

The school board must provide, therefore, an accurate system of bookkeeping and accounting. Requests for funds must be made on the basis of past usefulness and future needs. Estimates of needs should be made on the basis of the actual expenses of the preceding year, item by item, together with the estimated amounts for each item for the coming year.

In accordance with these suggestions, your superintendent has endeavored to work out in itemized form your school costs for the year just closing. Together with these costs appears for each item the estimated amount needed for the coming year. Increases for next year include the additional amounts necessary for the operation of the 8-room R——— school and the 6-room addition to the high school, both of which will be ready for occupancy in September.

The increase in the amount for teachers' salaries is made necessary by the employment of 7 additional teachers for next year. One additional janitor accounts for the unusual increase in the salary item for janitors. The supply item is increased in accordance with the expenditure for last year (including the deficit) due account being taken also for growth in enrollment. The item for transportation has been reduced from $3,000 to $1,000 due to the fact that approximately two thirds of the necessary elementary-school transportation will be eliminated by the opening of the new R——— school. Under each of the seven main headings of the budget appears an item called "other expense." This subdivision of funds for unforeseen or emergency items is believed to be more businesslike and at the same time less startling to the voter than the old practice of adding three or four thousand dollars at the end of the proposed budget as an emergency item. The total deficit has been included in the grand total of expenditures for the year now closing. The addition of receipts, actual and estimated, shows the net budget increase suggested.

While the budget here proposed calls for a net increase for next year of some $8,000, it is comforting to note that the per-pupil cost for the coming year is less than that for the preceding two years, even though the budget includes several entirely new items.

Budget Items

General Control	*1930–31*	*1929–30*	*Deficit*
Superintendent's office salaries.	$ 6,350.00	$ 5,850.00	
Telephone (all schools)	450.00	450.00	
Stationery and postage (all schools)	350.00	375.00	
Pupil enumeration	125.00	125.00	
Travel	400.00	400.00	
Other expense of control	300.00		
Total	$ 7,975.00	$ 7,200.00	
Instructional Service	*1930–31*	*1929–30*	*Deficit*
Principal's office	$ 150.00		$ 150.00
Salaries of teachers, $90,035 ..	91,235.00	82,330.00	1,000.00
Summer school and substitutes, $1,300			
Books	500.00	400.00	
Supplies 4,500	5,800.00	3,800.00	400.00
Shop 600			
Homemaking 600		600.00	
Science 100		600.00	
Library	500.00	500.00	
Other expense of instruction ...	1,000.00		
Total	$ 99,185.00	$ 88,230.00	
Operation of School Plant			
Janitors' salaries	$ 11,175.00	$ 9,200.00	$ 330.00
Fuel	4,000.00	3,500.00	
Water	500.00	600.00	
Light and power	2,200.00	1,800.00	
Janitors' supplies	1,000.00	800.00	
Other expense of operation	500.00		
Total	$ 19,375.00	$ 15,900.00	
Maintenance of Plant			
Repairs and upkeep	$ 3,500.00	$ 3,000.00	$ 675.52
Upkeep of grounds	200.00		
Other expense of maintenance ..	500.00		
Total	$ 4,200.00		
Fixed Charges	*1930–31*	*1929–30*	*Deficit*
Insurance	$ 2,400.00	$ 2,150.00	$ 150.00
Other expense ..	200.00		
Total	$ 2,600.00		
Capital Outlay			
Equipment for homemaking..	$ 215.00	252.98	
Typewriters and repairs	674.00	450.00	271.50
New desks, primary chairs, growth, etc...	600.00	1,200.00	
New power lawn mower	300.00		
Other equipment	500.00		
Total	$ 2,289.00		
Auxiliary Agencies and Sundries			
Health supplies.	$ 100.00	$ 100.00	
Movie expenses .	200.00	200.00	
Transportation .	1.000.00	3,000.00	
Extension courses	300.00		
Laundry (high-school gym towels)	600.00		520.00
Express	400.00	400.00	
Gym towels (new)	100.00	500.00	
Play day	100.00	100.00	
Other expenses .	500.00	1,100.00	
Total	$ 3,300.00	$ 5,400.00	$3,497.02
GRAND TOTAL.	$138,924.00	$127,280.00	
Receipts	15,020.42	11,527.91	
Net Budget	$123,903.42	$115,752.91	
Receipts	*1930–31*	*1929–30*	
Enumeration (State Grant)	$ 3,397.50	$ 3,289.50	
Library	100.00	85.00	
Town Deposit Fund.	143.08	143.08	
Rose Fund	520.00	520.00	
Tuition (high school)	10,640.00	7,140.00	
High-School rental ..	120.00	120.00	
Athletic Club Basketball Supplies Sold	100.00	140.00 89.51	
	$15,020.58	$11,527.09	

EMMETT T. MILLER
Superintendent of Schools,
Hannibal, Missouri

MR. EMMETT T. MILLER, formerly assistant superintendent of schools at Hannibal, Mo., has been elected to the superintendency of the school system, to succeed Livingston McCartney, who retires after a service of 25 years.

Mr. Miller, who holds degrees given by the University of Missouri, began his professional career in 1916 as a teacher of physics in the Hannibal High School. In 1918, he was made principal of the high school, and in 1927 was elected assistant superintendent. In this position he had charge of the supervision of the senior high school and the three junior high schools. He was elected in March to succeed Mr. McCartney, who retires at the end of the present school term.

Before Laying Out Any *New* Shower Installations or Making Changes in Your Present Showers You Should Send for the New 16-Page Bulletin on Showers and Shower Heads Designed by Speakman for Schools and Institutions

K-3395 Speakman Anystream Self-Cleaning Shower Head (Pat. Jan. 2, 1923)

FLOOD SHOWER

NORMAL SHOWER

NEEDLE SHOWER

K-3396 — Speakman Anystream Self-Cleaning Shower Head with ½-inch I.P. female inlet and lock-shield arranged to operate by a key.

K-3397 — Speakman Anystream Self-Cleaning Shower Head with ½-inch I. P. female inlet and arranged to be operated with a screwdriver.

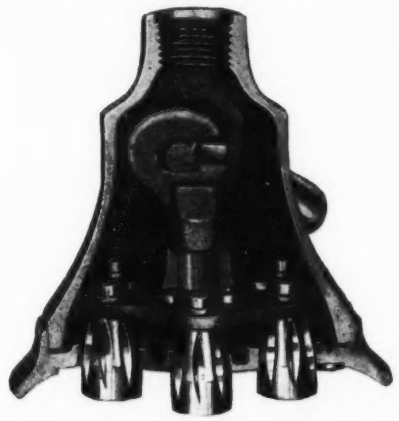
ARCHITECT'S BOOK

This book contains authoritative information on various types of showers and shower heads for regular and special installations.

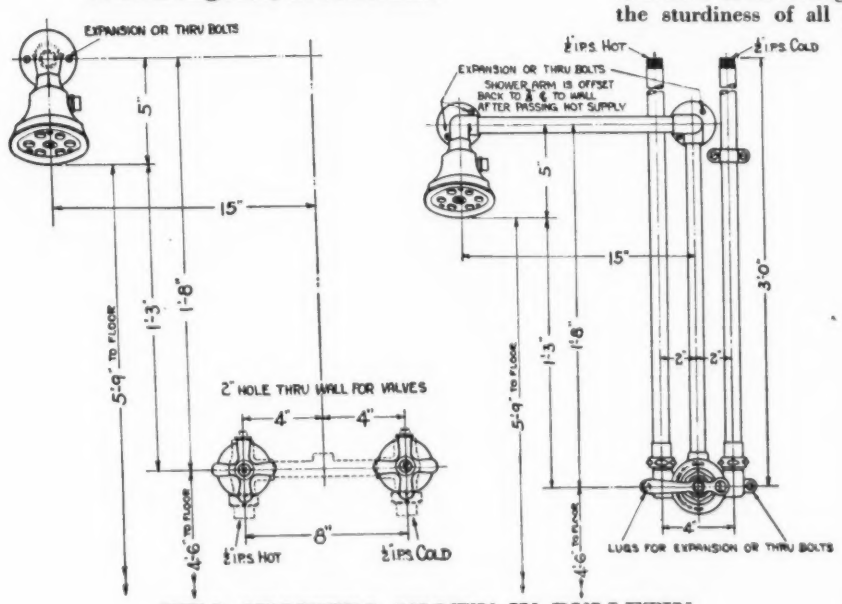
This bulletin, 8½ by 11 inches, gives complete details of the very latest developments in showers for schools and institutions. Among the showers shown are four which fit so closely to the wall that it is impossible for boys to do gymnastics on them. Then there are many kinds of heads, all employing the Anystream Self-Cleaning principle which does away forever with the annoyance of stopped-up shower heads.

The new bulletin is made for A. I. A. file and will be sent promptly to School Boards, School Superintendents and other school officials, also school architects.

SPEAKMAN COMPANY
Wilmington, Delaware



Cut away view of Speakman Shower Head showing the heaviness of all castings and the sturdiness of all parts.



TWO SHOWERS SHOWN IN BULLETIN

K-3105 — SPEAKMAN Built-In Heavywate Shower—Size ½-inch. Hi-Seat Valves with unions, renewable seats, metal escutcheons, and metal handles. Anystream Self-Cleaning Head with lock-shield control. Short arm with flange drilled for two bolts. Head equipped with lock screw.

Installation measurements as shown on drawing.

K-3110—SPEAKMAN Mixometer Shower—Size ½-inch. Mixometer with wall lugs and metal handle. Supplies from overhead. Horizontal discharge arm setting head 15 inches off center to left. Special elbow with wall flange at each end of arm. Anystream Self-Cleaning Head with lock-shield control. Head equipped with lock screw.

SPEAKMAN COMPANY, Wilmington, Del.
Please send me your bulletin on Showers and Shower Heads.

SPEAKMAN SHOWERS & FIXTURES

(Concluded from Page 79)

of selecting a well-trained inspector who will clearly understand the work.

The Time Element

Time for the completion of school buildings should always be taken into account so that they can be made available at the beginning of the terms, inasmuch as it is educationally bad to change classes and teachers during the various terms. Where the supervisory factors are working harmoniously and the inspector is coördinating the various crafts, progress will be rapid, but when incompetence steps in then delay is inevitable.

For instance: We had two junior high schools under way which would house 2,700 pupils, and which would enable us to discontinue the use of two frame structures of hazardous type. Quite a little publicity was given to the board of education by the newspapers owing to the character of the old building. By careful checking and conferences with the architect, the inspection department, the supplies department, and the contractor, we were enabled to take over the new buildings equipped properly for the reception of the pupils at the beginning of the term, and the hazardous buildings were razed. This instance shows very clearly the important part that time plays in the completion of schools.

The Importance of Contracts

Another important consideration entering into the construction of schools is a properly executed contract, plans, and specifications clearly setting forth all types of work, faithful performance bonds; also material and labor bonds, in proper form, and recorded.

With all of the foregoing conditions clearly set forth, a contractor is certainly in a position to make an accurate survey of all quantities and, when they are estimated, to set his price and cost, and then estimate the figure for the contract. With proper instruments of service, the yards of excavation, the amount of pumping, the piling, the exact areas of materials incorporated in concrete construction — such as footings, columns, girders, beams, floor slabs, and curtain walls — can be determined. As each classification carried with it a different cost, each must be set up correctly.

For every craft used, the contractor of buildings must be in a position to determine the actual quantities, and in that way determine the cost.

The Superintendent

The position of superintendent is another responsible place in the scheme of construction. The superintendent must have the necessary qualifications and must thoroughly understand his job. In my judgment, he must also possess a world of field experience as well as a well-balanced technical training. He must understand the proper method of organizing the work so that each subcontractor will be interfered with to the lowest possible extent by interruptions in the performance of his part of the contract, so that he may properly and timely coördinate with other branches of the work. To make these products, to deliver them to the building site, and to form them into the structure requires a vast amount of skilled labor. Labor and the producers of material of construction, and the subcontractors, have a large share in school construction.

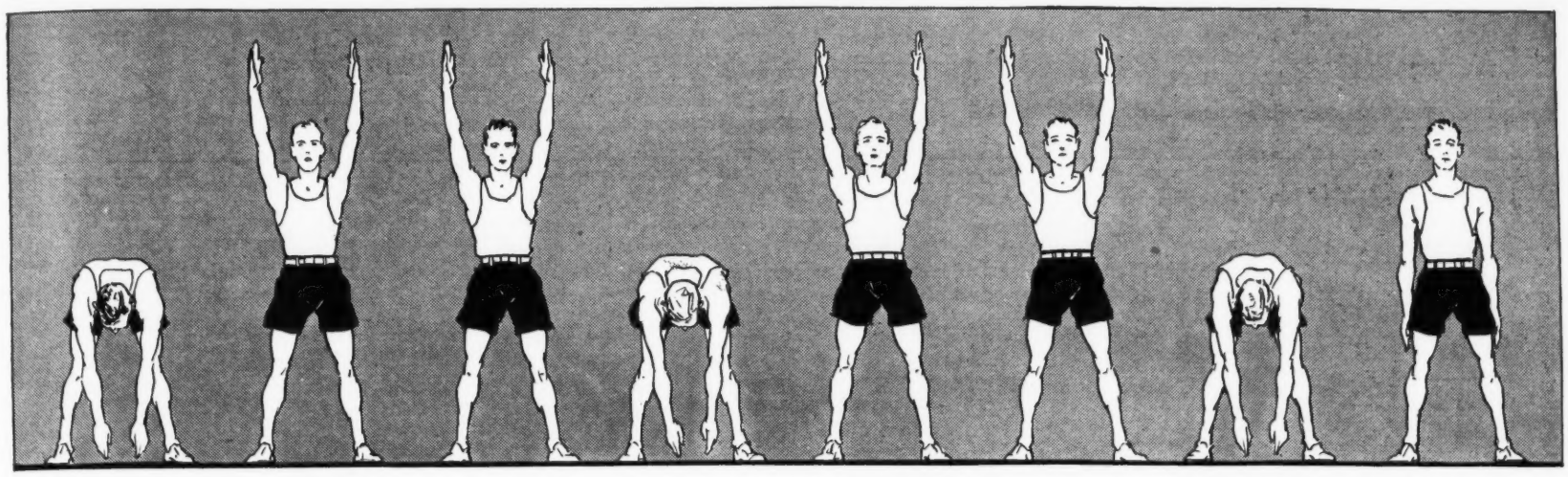
Then, when it is realized that every industrial operation requires the thought of many minds and the labor of many hands — that every material that goes into the building operation must have been worked over and manufactured into the finished product before it can be wrought into the structure and finish of the building — it is seen at once that organization under a capable directive head is required. The superintendent who brings together the material of construction and the equipment to erect them into the building is certainly a positive factor in the successful completion of the work.

Whenever all the elements and factors referred to do exist, we have, indeed, a fortunate position in regard to the construction of school buildings. But, such is not usually the case: The human element has a persistent way of entering into the situation.

For instance, some architects have very set ideas as to the person whom they would prefer to carry out the plans they have laid down, and the road is generally a rough and long one for anyone cutting in, as it were. Information and decisions on questions which arise are hard to get when needed, and other hurdles are placed in the way. Naturally, as time goes on, normal progress is impeded and the work may even become wholly disrupted and disorganized. When a school building in construction starts to slow down and misunderstandings happen, the moral of the men falls to a lower and lower level, until they get to a point of actual carelessness. When a contractor discovers that his estimate is too low, the fireworks start. He tries to find defects in plans and specifications, or any other excuse to enable him to lay a foundation for "extras" in the hope of salvaging himself or his figure. At other times we find that, the material men and subcontractors set up complications because they have underestimated the value of work. So they, at times, attempt to deliver inferior grades of material, or products not properly manufactured as provided under contract terms.

THE COUNTY SCHOOL UNIT

As many as one half the states now have the county unit system of support in some form. The county is a larger political unit than the district or the township and thus offers, its advocates claim, many advantages for it as a unit. Some of these advantages are: it makes possible better professional leadership for the rural schools; it also makes possible a more statesmanlike organization of rural schools; it promotes a location and coordination of rural schools; it makes possible more efficient business administration of the rural schools; it promotes a fair distribution of educational opportunities among all the children of the commonwealth; it promotes a more equitable distribution of the tax burden than through the district or the township system. — Homer P. Rainey, Franklin College, Indiana.



"... all out of step but Jim"

(AND 3 OTHERS)

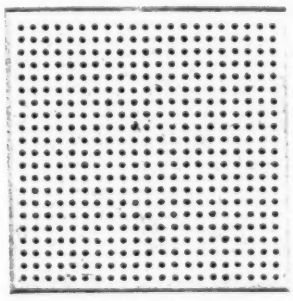
GYM instructors know how difficult it is to work in gymnasiums where sound is uncontrolled.

Hard surfaces throw back the instructor's words . . . pupils in distant rows fail to catch commands in the umble of sound that comes echoing back to them.

Shouting only makes matters worse—the best solution to the problem is to apply Acousti-Celotex sound absorbing tiles to the ceiling.

For example — in the Casey High School gymnasium, Casey, Illinois, shown here, sound is always under control. The Acousti-Celotex ceiling absorbs reverberation. Basketball games, and other indoor sports, are more enjoyable to spectators. Perfect acoustics makes this gymnasium ideal for student plays and other exercises.

The gymnasium of the Casey High School, Casey, Illinois. (Berger and Kelly, Architect, Champaign, Illinois). The Casey school is but one of hundreds of schools and colleges that have solved their noise problems permanently with Acousti-Celotex.



Acousti-Celotex ceilings may be decorated just like ordinary plastered surfaces. Use any kind of paint—the deep perforations guard against the danger of impairing sound-absorbing efficiency.

Acousti-Celotex also subdues distracting classroom noises . . . absorbs the racket in corridors, cafeterias, manual training rooms and swimming pools . . . quiets reverberation in assembly halls.

It comes in attractive tiles which are quickly applied to any ceiling. No remodeling is necessary—no interruption to school routine. The tiles may be left in their natural buff color, or stenciled in desired patterns.

Acousti-Celotex is applied by Acousti-Celotex contracting engineers, trained in acoustical problems. The school architect or school board may secure their services for a survey without cost or obligation. For an appointment, fill in and mail the coupon below.

The Celotex Company, 919 North Michigan Avenue, Chicago, Illinois. In Canada: Alexander Murray & Co., Ltd., Montreal. Sales distributors throughout the World.

ACOUSTI-CELOTEX

FOR LESS NOISE—BETTER HEARING

The words Celotex and Acousti-Celotex (Reg. U. S. Pat. Off.) are the trademarks of and indicate manufacture by The Celotex Company.

ACOUSTI-CELOTEX SERVICE A. S. B. J. 5-31

Fill out and mail to The Celotex Company, 919 North Michigan Avenue, Chicago, Illinois, for the appointment of an engineer to analyze your acoustical and noise problem. No cost. No obligation.

Name.....

School.....

Street.....

Town.....State.....

Washington Correspondence

A. C. Monahan, Formerly U. S. Bureau of Education New President of Washington Board of Education

Dr. Henry Barrett Learned, well known in educational work in the United States, has been elected president of the board of education of the District of Columbia, to fill the vacancy caused by the death of Mr. Charles F. Carusi. Dr. Learned has been a member of the board since 1925, and also served as a member for four years from 1917 to 1921.

Dr. Learned is a college instructor in history, and an authority on many historical questions. He served on the faculty of the University of Chicago, Harvard University, Yale University, and Leland Stanford University. At present he is engaged in historical research work in the District of Columbia.

U. S. Office of Education Personnel

Dr. Frederick J. Kelly, professor of higher education in the University of Chicago, has been appointed chief of the division of colleges and professional schools of the U. S. Office of Education, to fill the vacancy caused by the resignation of Dr. A. J. Klein, who is now on the faculty of the University of Ohio. Dr. Kelly has had wide experience in educational work as a teacher, a school superintendent, a college instructor, and a university president. He was superintendent of the training school of the Kansas State Normal School at Emporia from 1914 to 1916, having previously held a similar position at the Spearfish, South Dakota, State Normal School. From Emporia he went to the University of Kansas as dean of education and university administration. From 1923 to 1928 he was dean of administration of the University of Minnesota, after which he served as president of the University of Idaho. Dr. Kelly will be the fifth person to hold this position in the U. S. Office of Education. The position was created in 1910 during the administration of Dr. E. E. Brown as Commissioner of Education, and the first encumbent was Dr. Kendric Babcock, now dean of the University of Illinois. Another change in the Education staff is due to the resignation of Dr. Ambrose Caliver, who becomes president of Lincoln University at Jefferson City, the state university for the colored race. Dr. Caliver has been with the Office for less than a year, holding the position of specialist in Negro education.

Four new positions in the Office of Education, created by the past Congress, will be filled July 1 when the salaries provided become available. These positions are: Specialist in the Education of Physically Handicapped Children, at a salary of $4,600; Specialist in Radio Education, at $4,600; Specialist in Education in Western Europe, at $3,800; and Specialist in Tests and Measurements, at $3,800.

Federal Survey of School Finance

The special survey of school finance throughout the United States to be undertaken by the U. S. Office of Education, will be begun July 1 when the appropriation for it becomes available. This study, to be carried out in three years' time, will be completed at a cost of not over $350,000. The amount available for the year beginning July 1 is $50,000.

The Commissioner of Education will soon name an advisory committee, to be known as the board of consultants, which will serve in a general way as a steering committee for the field and other workers. It will have as members a state superintendent of public instruction, a state tax commissioner, a state director of finance, a city school superintendent, a representative of the U. S. Chamber of Commerce, and two or three college instructors in finance and school administration. Later a lay board will be appointed, composed of interested citizens not in educational or public financial work, to advise with the committee. Dr. John Cooper, Commissioner of Education, will direct the survey.

The action of Congress in authorizing this study of school finance resulted largely from a joint request from the Association of State Chief School Officers and the Department of Superintendence of the National Education Association.

School Building Schedule for the District of Columbia

A schedule for school-building construction for the District of Columbia has been prepared by the Municipal Architect's Office, giving the dates when new buildings authorized by Congress will be completed during the present and coming calendar years. They are the buildings included in the appropriation for the school year 1931–32, and do not include those now under construction.

Contracts will be let in May or June for eight buildings to be completed before the end of the calendar year; four of these are new buildings, and four are additions to present schools. This construction will add 56 classrooms to the total classroom capacity of the school system. It is worthy of note that the plans for these buildings have been prepared and the contracts will be let from three to six weeks before the money for their construction is available to help the unemployment situation.

Contracts for five additional buildings or additions to present buildings will be let before September 1, 1931, these buildings to be completed in 1932. Between then and December 31, 1931, six other contracts will be let. This means that a total of 19 contracts will be let before the end of the present calendar year for new buildings, or substantial additions to present buildings, all to be completed before Christmas, 1932.

Safety for School Children

The commissioners of the District of Columbia will probably build underpasses to enable school children to cross thoroughfares in front of several elementary-school buildings in the near future. The proposal is to build ten of these underpasses at schools where traffic conditions are bad with schools located where the children are required to cross arterial highways. These would be regarded as an experiment, future construction depending upon the results. It is estimated that the cost would vary from $6,000 to $10,000 for each underpass depending upon conditions to be met.

(Concluded on Page 86)

THE SPECIFICATION FOR SANITATION

(Concluded from Page 84)

The U. S. Indian Office

The reorganization of the U. S. Indian Office to conform to the new policy of the Department of the Interior in handling Indian affairs, has been completed. Education has been put in one of the two main divisions of the office, one to be known as the Division of Human Relations under an Assistant Commissioner. This division will include also the Health Work and the section on agricultural extension and industry.

The education section is under the charge of Dr. W. Carson Ryan, formerly of the United States Office of Education and later professor of education at Swarthmore College. The assistant director of education is Miss Mary Stewart, formerly of the U. S. Department of Labor. Trained educational experts are being obtained for supervisory and other work in the field, as well as for principals and teachers of special subjects. Dr. Ryan will also have charge of the schools for natives in Alaska, formerly under the Alaska Division.

Public Telephone Pay Stations in Public Schools

A demand on the part of parents for means of communication by telephone from their children in school in cases of necessity has resulted in the completion of arrangements for the installation of public telephone booths in public schools. The phones will be placed in the buildings by the telephone company without putting the board of education or the district under any financial or other responsibility in connection with their installation or operation. All buildings now have telephones in the principals' office, but the regulations forbid their use by pupils of the schools.

School Health Work in the District of Columbia

Considerable discussion has arisen in Washington over the proper authorities to have charge of the health work in the schools, including medical inspection of the pupils and health teaching. It is now under the District Health Department. A school official proposed that it be transferred to the School Department. He expressed the need for an extension of the work including an intensive health campaign that the present health department cannot undertake for lack of sufficient personnel. His plan calls for the appointment of a medical staff and helpers to work directly under the board of education and the superintendent. Various citizens' associations, including the District Public Schools' Association, have gone on record as disapproving the proposal.

Washington Interested in School Board Journal Editorial

An editorial in the March AMERICAN SCHOOL BOARD JOURNAL, condemning the constant action of Congress in interference with administrative details in the District of Columbia public-school system, has met with hearty approval on the part of citizens of Washington. *The Washington Star,* the leading evening paper published in the District of Columbia, reprinted the entire editorial in one issue and in the next a half column editorial comment on it. The *Star* agrees entirely with the editorial in the AMERICAN SCHOOL BOARD JOURNAL that administrative details should be left to the board of education without Congressional interference. It feels that the district school board and the superintendent of schools have shown by their records that they are competent to manage the school system in a satisfactory manner.

MICHIGAN SUPERINTENDENTS MEET AT LANSING

The fifty-eighth meeting of the Michigan Association of Superintendents and School-Board Members was held March 26–27, at the Hotel Olds, Lansing, Mich. President I. M. Allen, of Highland Park, made the opening address, speaking on the subject, "Economies in School Administration."

Mr. Chester F. Miller, superintendent of schools of Saginaw, presented a report of the committee on "School Economies Through Efficient Administration and Management." The report was largely the result of case studies of school funds, standardization of supplies, insurance, financial control and budgeting, internal accounting, operation and maintenance, efficient janitorial service, and school revenue increases. Following the reading of the report, there were discussions by Mr. O. W. Haisley, of Ann Arbor, Mr. L. H. Rich, of Detroit, Mr. E. F. Down, of Ferndale, Mr. A. C. Lamb, of Hamtramck, and Mr. H. B. Ward, of Highland Park.

President Allen acted as toastmaster at the evening banquet meeting at which Mr. L. M. Hutchins, Grand Rapids, spoke on "Teacher Annuity and Retirement Fund"; Mr. E. J. Millington, Cadillac, talked on "The Education of a Prince"; and Dr. L. D. Upson, Detroit, discussed "Economies in the Administration of Governments."

At the Friday morning session, Mr. S. M. Brownell, superintendent of schools, Grosse Pointe, presented the report of the nominating committee: for president, Spencer D. Kelley, Lansing; for vice-president, Sidney Miller, Benton Harbor; for secretary, H. C. Daley, Highland Park. The report was unanimously adopted.

Following the report, Mr. M. R. Keyworth, superintendent of schools, Hamtramck, talked on the subject, "The Legal Aspects of School-Board Minutes," and Prof. P. V. Sangren presented a discussion of "False Economies in Education."

The association unanimously adopted a resolution of appreciation for the work of the officers and those who assisted in the preparation of the program. The meeting adjourned at 10:30 a.m., to attend a session of the Michigan Teachers' Association.

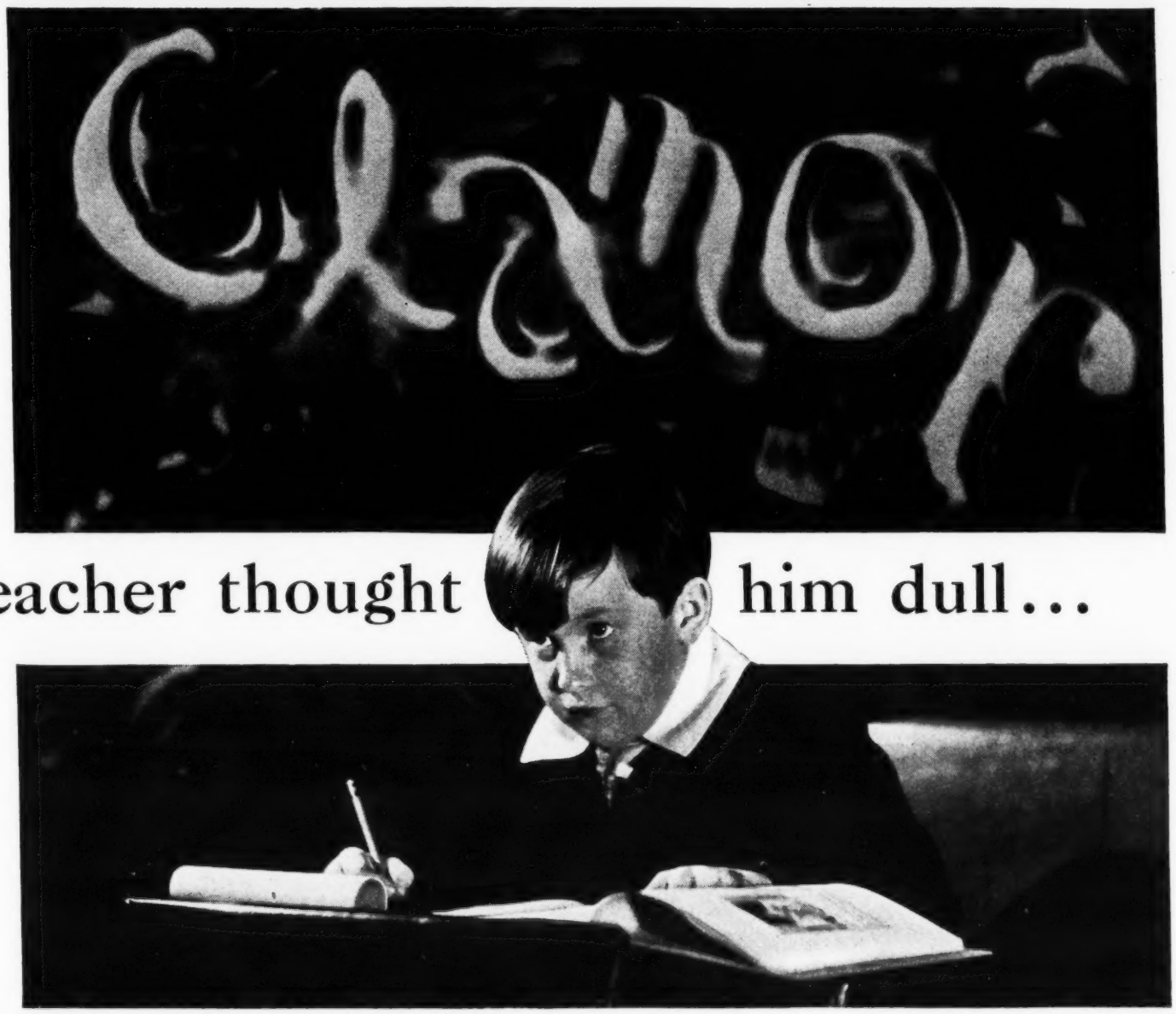
NEBRASKA SUPERINTENDENTS MEET AT LINCOLN

The department of superintendents and principals of the Nebraska Teachers' Association held its annual meeting at the Lincoln Hotel, in Lincoln, on April 11.

Dr. F. C. Smith, registrar of the graduate school of Harvard University, spoke at the meeting. Mr. E. M. Hosman, executive secretary of the Nebraska Teachers' Association, spoke on "Rôles That Superintendents Play in Relation to the Teachers' Association." Those who spoke on special topics were R. B. Carey, Beatrice; O. L. Krula, Virginia; E. W. Wiltse, Franklin; R. H. Carter, Kearney; and Sarah T. Muir, Lincoln.

At a later session, Dr. F. E. Henzlik, of the University, gave a talk. Prof. A. A. Reed, also of the University, talked on "Curriculum Conditions in Nebraska High Schools." Dr. H. C. Koch, of the University, and Dr. G. W. Rosenlaf, director of secondary education in the state department, had charge of the discussions.

A new constitution was submitted to the members for approval. It was decided to hold one regular meeting each year, the time and place of the gathering to be decided by the executive committee.



His teacher thought him dull...

classroom noise made him appear so

As a matter of fact, this child is above the average in intelligence but just because his nerves are unusually sensitive, NOISE affects him more than it does his phlegmatic schoolmates.

Noise confuses the brain—impairs accuracy—and dulls the senses. This has been demonstrated by scientific test and observation. For example, investigation has shown that by quieting ordinary schoolroom noise, the speed of mental multiplication has been increased 30%.

Don't allow noise to handicap the students under your care ...save your teachers from the nerve strain and mental fatigue of working against detrimental and easily remedied sound conditions.

More than 3,500 square feet of J-M Sound Control Material were used in the ceiling of this cafeteria of the John Hay High School in Cleveland, O.

Johns-Manville Sound Control Treatment stimulates clear thinking—reduces fatigue

Noise in disturbing volume need no longer be tolerated in a school. Johns-Manville Acoustical Engineers—pioneers in developing methods of sound control—can eliminate this evil of noise in schoolrooms and corridors. They have developed methods and materials that muffle it to an extraordinary degree. New schools everywhere are applying Johns-Manville Sound Control Treatment. It can be applied at reasonable cost to modernize your present school buildings.

Sound control is a modern aid to education that every school official should investigate. Just ask our nearest office to arrange for a visit by our Sound Control Expert or write Johns-Manville, 292 Madison Ave., New York City.

J-M Sound Control Materials, fireproof and sanitary, are usually applied to the ceiling. They do not interfere with architectural plans, and often actually improve appearances.

Johns-Manville

JOHNS MANVILLE JM PRODUCTS

Sound Control Treatment

The Editor's Mail Bag

SELECTING SCHOOL ARCHITECTS

To the Editor:

I read Dr. V. L. Culp's story regarding the selection of a school superintendent in the April issue of the JOURNAL and found it exceedingly interesting because of the close parallel which it makes with the method so often used in selecting an architect for schoolwork.

Fifteen years ago the architect who would make the most free sketches and who would submit the largest and loudest picture got the job. In recent years we have succeeded in about eliminating that procedure, but we still have the fellow who previously interviews the members of the board individually and has it all arranged before the session at which architects are to be given a hearing. After others have been interviewed and then sent away to await action by the board, this enterprising gentleman then walks in with a box of cigars and after scattering some hearty handshakes and backslapping, with a few good stories, he walks out again with a contract for the job.

However, such occurrences are becoming less frequent all the time so far as architects are concerned, and I hope that your description of the transaction at Hickory Center can no longer be called typical of the usual procedure.

CARL REGER.

April 7, 1931.

THE EVILS OF EMPLOYING INEXPERIENCED SCHOOL ARCHITECTS

To the Editor:

The increasing amounts of money being expended in the construction of rural and centralized schools, together with the inexperience of the school boards in charge of such work, has opened up a field which is making "ambulance chasers" of the mediocre architects of small practice, in their own vicinity, particularly those with sales ability. Such men posing as specialists, together with contractors of the same type, are traveling around the country calling upon such boards and reaping a rich harvest. Most school boards, are inexperienced in such operations, usually building their first school, and will probably be replaced by new members throughout before another project matures.

The lack of foresight in these buildings, the questionable details of construction by incompetence on the part of such architects, and the desire for profits by irresponsible contractors, must have its effect, and a continuance of such practice will unquestionably bring its reaction. The inevitable swing of the pendulum in the opposite direction, taken together with rising taxes, business depression, and a too general impression on the part of a portion of the public and many legislators that schools are being overemphasized may, in its accumulative effect, seriously, and at no distant date give school construction of this type a serious setback.

JAMES R. VEDDER.

Syracuse, N. Y., April 8, 1931.

THE INSURANCE OF SCHOOL BUILDINGS

The Case Against Self-Insurance

To the Editor:

I notice in a paper summarizing addresses at the Detroit meeting of the Department of Superintendence an abstract of an address by Mr. H. C. Roberts advocating self-insurance by school districts. Based on my experience as an insurance man and also as president of the Amarillo school board, I wish to submit for your consideration the following:

Mr. Roberts is not very definite in what he advocates, and I am not sufficiently familiar with the recent "self-insurance" experiments he refers to, to be able to spell out exactly what he means. However, I assume that he means that a large number of school districts, with widely distributed risks, should unite in some form of mutual or coöperative insurance, since it would be criminal for the schoolhouses in a single city, exposed to one common conflagration hazard, to go it alone. Upon that assumption, what he proposes is similar to a plan advocated some years ago for the churches of the Methodist Episcopal Church South mutually to insure one another. The objections to that plan, translated to apply to schools instead of churches, are as follows:

The Assessment Plan

Either a fund adequate to cover the maximum possible losses must be promptly paid up and continuously maintained or the assessment plan must be followed. If the assessment plan is followed and heavy losses occur — and they may occur at any time — then heavy assessments must be levied and those assessments must all be promptly collectible, otherwise there will be trouble. Could the school districts all promptly meet heavy assessments; and would they all promptly pay up even if they could? On the other hand, if the school districts put up and maintain an adequate insurance fund and then suffer a run of exceptionally heavy losses, the fund will pay the losses but the school districts must replenish the fund out of their own money. In other words, the excess losses will be kept right at home, will fall altogether upon a few school districts, without any outside money coming in to help them, as would be the case if insurance were carried in a standard company with its funds derived from many widespread sources. Such insurance would be "sound" but it would not well distribute the losses.

The fundamental trouble with all plans of this kind is that they count the savings that will be effected if good fortune is met, ignore the distressful possibilities of bad fortune. And the misleading factor is that good fortune often runs for years and years, so that there is always a gambling chance of getting by. But the chance of bad fortune is always there; the true function of insurance is to provide against that chance, and these coöperative schemes generally fail to do it — they fail to function exactly when insurance is most needed.

The Political Element

There is another serious objection to so-called self-insurance or coöperative insurance by a *political* corporation or corporations from the standpoint of prevention. The greatest influence for fire

(Concluded on Page 92)

(Concluded from Page 89)

prevention in this country is the pressure brought to bear by the standard fire-insurance companies, through their inspections and premium ratings, to bring property up to higher safety standards. In actual practice, where a political corporation "self-insures," no standards of safety are enforced against its buildings. Municipal fire ordinances and state building laws are seldom enforced against public property. And such property is seldom inspected critically until after some spectacular fire reveals shocking conditions.

Instances of this laxity are too numerous to recount. Confining myself to New York state alone, I may mention that the need of a $50,000,000 bond issue to replace practically all the public institutions for the insane was, some years ago, revealed by the complete destruction of one such building along with many of its inmates. And some 20 years ago the historically invaluable state library in the capitol at Albany was consumed by fire because it had been left long exposed, through indifference, to fire hazards that would never have been tolerated in a private risk underwritten by a standard insurance company.

Moreover, "self-insurance" by the state and political corporations is only too likely to degenerate in practice to more or less complete neglect of provision to meet losses. I have not the data to summarize experience in that line to date, but the following excerpts from an article in an insurance journal does so down to some four or five years ago:

Is It Self-Insurance?

"Some states carry their own insurance risk on state properties, but the basis of average is far from adequate. They have comparatively few buildings, many with values running into millions and this violates the fundamental principle of insurance. Several capitol buildings and large state institutions have burned, and as no insurance fund had been maintained the money was not available for prompt rebuilding and heavy increases in taxes were necessary. Among such fires in public buildings in recent years are the state capitols of New York, Iowa, Wisconsin, Mississippi, Missouri, the Parliament buildings of Ottawa, and others.

"The situation is still worse as regards municipalities which attempt to carry their own insurance risk, because of the much more limited and inadequate basis of average. Most of their values are congested in a few buildings, and usually there is no surplus fund available to meet a disaster. Most municipalities which carry their own risks merely take chances on a fire, accumulating no insurance fund, and if a fund is accumulated there is little saving in comparison with the premium paid for regular insurance, and no certainty that a serious fire may not come along before the fund has become anywhere near adequate to meet a bad loss."

Self-insurance is really not insurance at all since there is no transference of risk, which is one of the fundamental laws of all insurance. Hence, it is simply gambling against the chance of loss.

G. G. ORDWAY.
President of Board, Amarillo Independent School District and Amarillo Junior College District, Texas.

March 30, 1931.

School Building News

SCHOOL-CONSTRUCTION COSTS LOWER

The Better Schools League, Chicago, Ill., has recently issued a statement, in which it is shown that there has been a reduction in school-construction costs during the period of 1930–31. A study of 140 school districts which let construction contracts during the year shows that there has been a marked reduction in costs much greater than generally believed. In a few cases, the savings ran 40 per cent or higher, and a few very low, depending upon the section of the country.

The median cost for the 140 cities showed 15-per-cent savings, as against the higher costs during the period from 1925 to 1929. Fifty per cent of all the cities letting contracts for schools during the past year came within a saving ranging from 10 to 20 per cent.

Practically all of the school districts stated the savings were effected in part by lower costs of construction material. One hundred twenty-four reported closer estimates by contractors. Seventy-seven reported lower wages as a factor in savings. Forty-five reported savings as a result of a more favorable bond market. Thirty-one reported a saving resulting from higher daily production by the workers.

In addition to those reporting building activity during 1930, 326 cities indicated that building projects would be begun in the near future. These building projects will serve the double purpose of helping to relieve the unemployment situation in the various districts, and of meeting school-seating demands at a time when school construction results in a material saving to the taxpayers.

CALIFORNIA SCHOOLHOUSE STANDARDS

A California commission on educational problems has made a report on standards of schoolhouse construction which embodies the following:

"The adoption of state standards for the construction of public-school buildings is regarded as a reasonable and necessary protection for the school children and the public at large. It would seem proper that the state board of education should be empowered not only to prevent the erection of schools which do not conform to the state standards, but also to assist and advise school officials in connection with plans for the construction of school buildings.

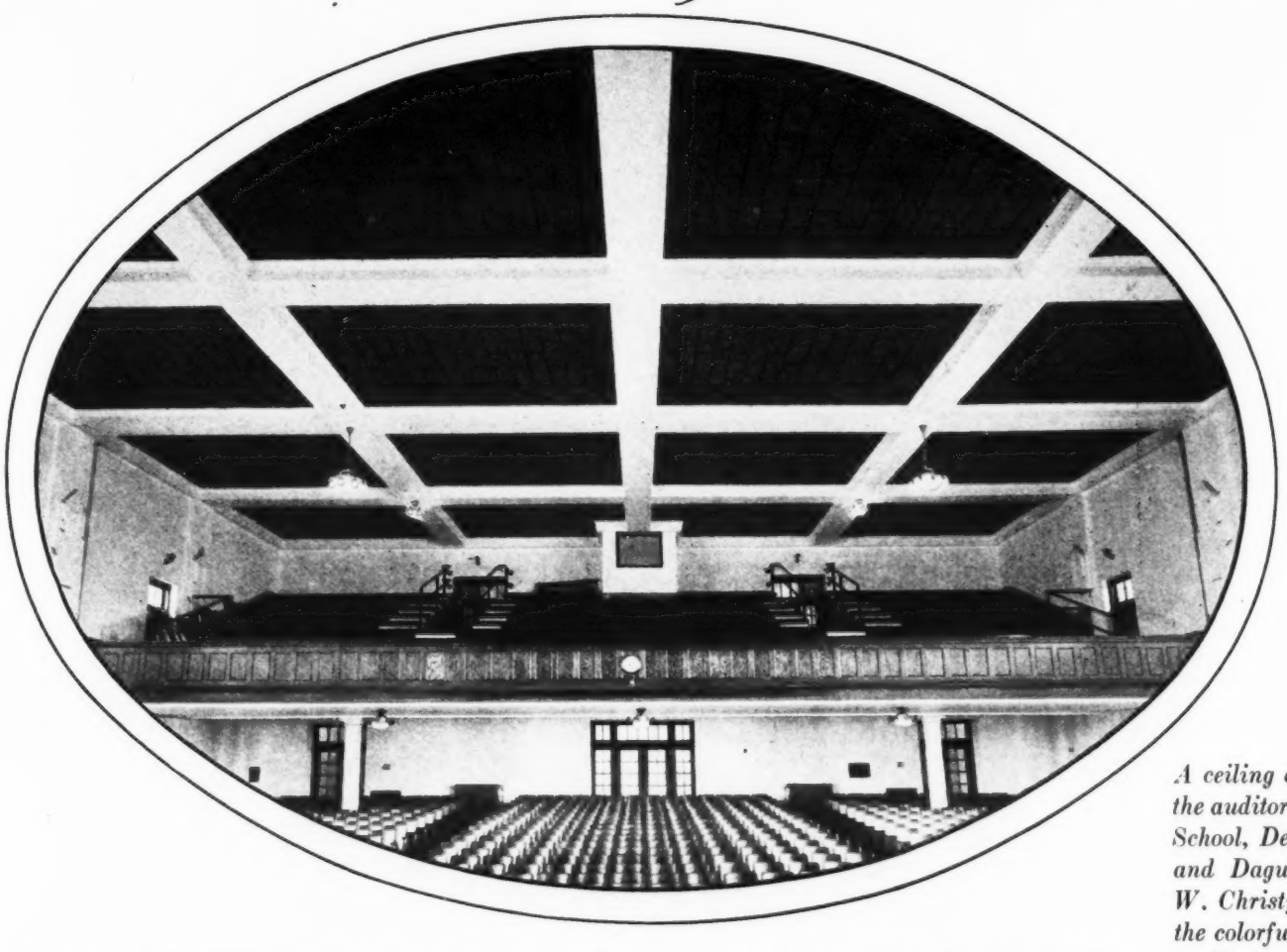
"Beyond this, in the judgment of the commission for study of educational problems, the state should proceed with great caution in overruling local school authorities, and the following statement from the school survey of the State of Utah, sustains this conclusion:

"The state should not have authority to determine what the district should accept in the way of a building program. . . . The state should set up minimum standards that should be met by each new building. These should be only on such matters as are of fundamental importance. To enforce this, all plans for new buildings and for remodeling, involving structural changes, should be approved by the state. The state will thus be given an opportunity to advise districts on many other points than those involved in the minimum standards."

(Continued on Page 94)

These seats are in a "dead spot." They are of little value, for words cannot be understood.

How many "DEAD ROWS" ARE THERE IN *your* AUDITORIUM?



A ceiling of Armstrong's Corkoustic in the auditorium of the New Junior High School, Decatur, Ill. Brooks, Bramhall and Dague, Decatur, Architects. Roy W. Christy, Contractor. You may like the colorful stencilled designs that are so easily applied with cold-water paints. Or, as used here, you may prefer the natural rich browns of Corkoustic blended in perfect harmony with any decorative scheme.

UNLESS your auditorium is acoustically "correct" there probably are rows of seats from which it is impossible to hear. "Dead spots" they're called. In other places sounds may seem too loud. Or echoes and reverberations may jumble words into meaningless noise.

These poor acoustics can easily be corrected. We suggest you permit Armstrong engineers to study your auditorium. This sound-engineering service is offered without charge. We shall be glad to give recommendations, outlining how Armstrong's Corkoustic will solve your acoustical problems.

Corkoustic has another useful feature—since it is a cork product, Corkoustic also provides efficient insulation. The warmth produced by your heating equipment is not dissipated through walls and ceilings protected by cork. Appreciable fuel economies are effected, and comfortable temperatures are easier to maintain.

Book sent free. Let us send you a copy of "Acoustical Correction." Thirty-two pages of information on sound and sound-quieting. Gives full data on Armstrong's Corkoustic. Address Armstrong Cork & Insulation Company, 954 Concord Street, Lancaster, Penna.

Armstrong's (A) Product

Armstrong's Corkoustic

for the acoustical treatment of all buildings

(Continued from Page 92)

TENNESSEE AIDS SCHOOLHOUSE PLANNING

The State Educational Department of Tennessee, through its school-house planning division, J. B. Calhoun, director, renders the following distinct types of service:

1. Plans for school buildings up to, and including, the six-teacher type are developed and distributed.
2. Surveys are made to help school officials in the study of their school-building needs. These studies are taken to the stage where a detailed list of items to be included in each building is prepared so that a community can instruct the architect definitely just what it wants in a building.
3. Building plans submitted by school officials and architects are studied and recommendations made for their improvement to better meet educational needs.
4. Information is distributed to school officials regarding materials, equipment, hygiene, sanitation, and educational practices in modern school plants.
5. Consolidation projects are studied and the advisability of such consolidations determined. Consolidation aid functions through this Department.
6. As opportunity permits, the best school buildings of the state are visited, the good features and undesirable features as found by the school people using them are noted and this information is passed on to other communities contemplating building.
7. School buildings requiring alterations and additions are studied, and sketches showing recommended changes are submitted to school officials.

THIRTY YEARS JANITOR OF ONE BUILDING

Mr. W. B. Troy, custodian of the Eugene Field School, Neosho, Missouri, enjoys the distinction of serving thirty years in this building.

Mr. Troy is extremely proud of the progress of the school. He believes that the improvements of the past few years in schools, and the physical improvement of the building have accomplished a great deal for the welfare of the school as compared with former years. When Mr. Troy began work as a janitor in the Field School, outside toilets were in use, and the building was heated by brick furnaces located at different points in the structure. Modern sanitary toilets and lavatories have replaced the older types of sanitary facilities, natural gas is being used for heating purposes, and drinking fountains are located in each corridor. During the past few years the lighting system has been changed, with inclosed globes that provide 5 foot-candle power of light at each desk. The heating system has been remodeled, giving in addition to the gas heat, a two-pipe vapor vacuum system. The playground has been made useful and attractive by complete playground facilities and an attractive landscaping plan.

W. B. TROY, CUSTODIAN, EUGENE FIELD SCHOOL, NEOSHO, MISSOURI

The accompanying photograph shows Mr. Troy in front of the Field School.

SCHOOL JANITOR SERVICE

The school janitor service in small towns was recently discussed by Supt. R. D. McAlister, of Suffield, Conn., as follows:

"Upkeep and maintenance of 1- and 2-room schools present a problem which it is difficult to solve. Usually a sort of hand-to-mouth policy is in vogue. When a window is broken, a flag rope stolen or a water pail leaks, some time elapses before action is had.

"Take the matter of scrubbing and oiling floors for an example. In most rural towns, twice a year is considered sufficient. The work is done by anybody who happens to be willing. How can a more systematic plan become the policy?

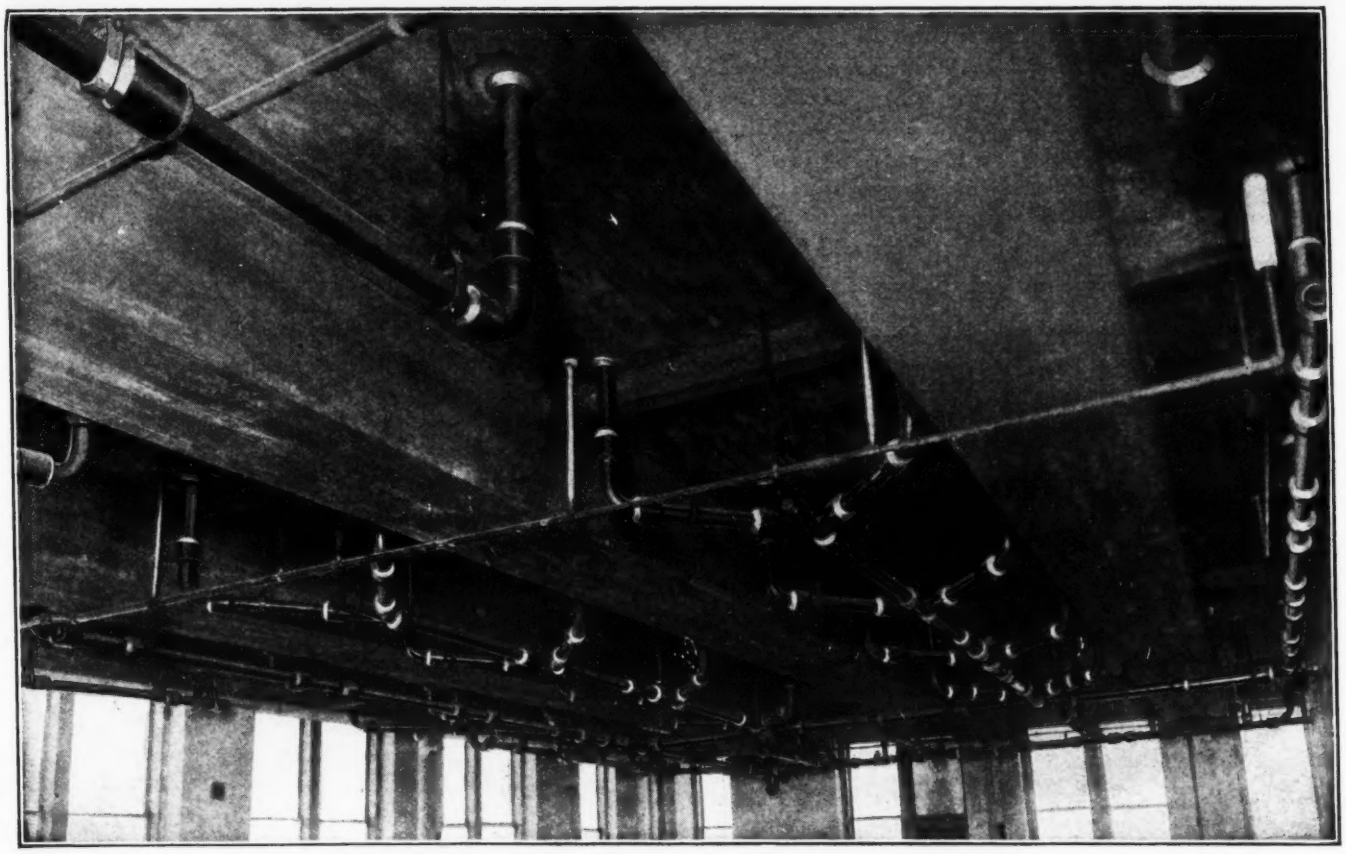
"In the summer there are innumerable small repairs and cleaning jobs to be done. Paint and varnish are needed; desk tops need sanding and shellacking; blackboards get gray and smooth; woodwork needs cleaning. How are these matters handled?

There are six 1-room, two 2-room, two 6-room and one 8-room building in Suffield. Each one of them has a janitor to take care of the fires and the cleaning. We have put two of our janitors who are handy with tools on a twelve months' basis. To do this, we simply gave them two more months' salary. They have an electric sanding machine, an electric scrubbing machine with its equipment, an electric spray-painting machine, their own automobiles, and we allow them mileage. Requisitions for paint, hardware, and other materials are honored so that they may proceed during the summer.

"A list of repairs, cleaning jobs, and paint jobs, is made out with the help of the teachers, principals, janitors, and school committee. All the items which are not to be let as contracts are included in the janitors' list. All this is approved by the school committee to whom it is recommended by the superintendent. During the summer this plan takes care of all the routine small jobs.

"During vacation periods (we are on the eight-week plan), these two janitors scrub and oil all

(Concluded on Page 96)



KNIGHT-WARE Waste Lines in Columbia Presbyterian Hospital Centre
The above photo was taken in the 10th floor laboratory and shows quite clearly the method of hanging KNIGHT-WARE Pipe and Fittings. There were 96 Outlets on this floor. KNIGHT-WARE was used exclusively in this structure for all Acid Proof Waste and Ventilating Lines.

Figure 272-A
B&S 90° or
Quarter Bend

Figure 273-A
B&S T-Y Fitting

GUARANTEED SATISFACTORY — MAURICE A. KNIGHT — ACID-PROOF CHEMICAL STONEWARE
KNIGHT-WARE
"IT IS THE CHEMICAL BODY ITSELF"

These institutions are equipped with KNIGHT-WARE

PRINCETON UNIVERSITY
Chemistry Building
COLUMBIA UNIVERSITY
Chemistry Building
WEST VIRGINIA UNIVERSITY
Hall of Chemistry
OHIO STATE UNIVERSITY
Chemistry Building
Pharmacy Building
JOHNS HOPKINS UNIVERSITY
Chemistry Building
Hygiene Building
Biology Building
NEW YORK UNIVERSITY
Chemistry Building
WASHINGTON UNIVERSITY
Biology Building
DUKE UNIVERSITY
Chemistry Building
PURDUE UNIVERSITY
Chemistry Building
Pharmacy Building
PENN STATE COLLEGE
Chemistry Building
LAFAYETTE COLLEGE
Mining Engineering Hall
BATTELLE MEMORIAL
Chemistry Laboratory
McGILL UNIVERSITY
Pulp & Paper Research Bldg.
COLUMBIA PRESBYTERIAN
Hospital Centre

—Choice of the Leaders Why? Because it is . . . .

Positively **acid, alkali** and **corrosion proof** regardless of strength or temperature of solution . . . **Tough** and **Durable** and resists abrasion to the highest degree . . .

Economically and **easily** installed. Hung in the same manner as any other material, one hanger per length on horizontal lines and one support per ten feet on vertical risers only being required. Joints are economically made and easily poured and will withstand fully 20 pounds pressure . . .

Less expensive than silica irons and most other acid proof equipment.

Permanent. Will last the life of the building in which it is installed.

We are prepared to supply you with any size, type or design of Fittings, either standard or special, that you may require.

Our new 48 page catalog on KNIGHT-WARE LABORATORY EQUIPMENT containing complete details and fully illustrated will be mailed upon request. Send for your copy.

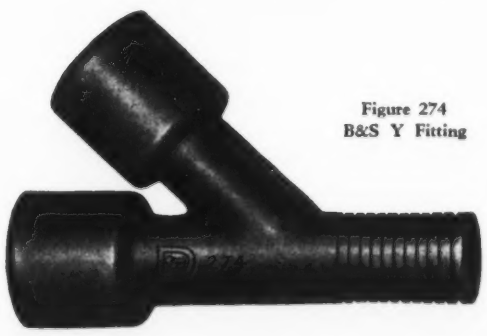


Figure 274
B&S Y Fitting

MAURICE A. KNIGHT

149 SETTLEMENT STREET

AKRON, OHIO

New York City	Philadelphia	Chicago	St. Louis
804 World Bldg.	1600 Arch St.	230 N. Canal St.	1st National Life Bldg.
Beekman 1657	*Rittenhouse 6300-6301*	*Franklin 4658*	*Main 1784*

San Francisco	Niagara Falls	Montreal, Que.
Merchants Exchange Bldg.	309 United Office Bldg.	1307 Notre Dame St., West
Douglas 375	*Niagara Falls 507*	*Main 2625*

(Concluded from Page 94)

the floors and take care of minor repairs. If, at any time, something goes wrong with plumbing, heating, doors, or windows, one of these men goes there to fix it. The difference in salary is saved many times over if capable, conscientious men like ours handle the work."

BUILDING NEWS

♦ Shreveport, La. The voters of the city have been asked to approve a 1-mill tax for school-building purposes. Shreveport has adopted the pay-as-you-go plan for financing school construction and is the only city in the south operating on this plan. The board members believe that bond issues make taxes burdensome, and that too much of the money is devoted to paying interest. Through the tax and a cash-reserve fund, the city has kept its building program abreast of the rapid increase in population.

♦ Garner, Iowa. At a recent school election, the voters approved a bond issue of $25,000 for the construction and equipment of an addition to the high school. The board expects to advertise for bids on the bonds, the proceeds to go toward the construction of the new building.

♦ Pueblo, Colo. The school board of Dist. No. 20 recently sold $250,000 worth of school bonds, at an interest rate of 4½ per cent per annum. The proceeds of the bonds will be devoted to school-building purposes.

♦ The voters of Charles City, Iowa, have approved a bond issue of $250,000 for the erection of a high school.

♦ The voters of Sioux City, Iowa, defeated a $700,000 school-bond-issue proposition.

♦ The school district of Refugio, Tex., has approved a bond issue of $100,000 for new school buildings.

♦ Altoona, Pa. A $75,000 bond issue has been approved by the secretary of internal affairs.

♦ Penfield, N. Y. The school district has authorized a bond issue of $200,000 for new schools.

♦ Marathon, N. Y. A school-improvement bond issue of $300,000 has been approved by the voters of the school district.

♦ Cleveland, Ohio. The school-building department has begun work on the annual schoolhouse cleaning. The program includes repairs to furnaces, replacing of floors, washing of paint, and other miscellaneous jobs, which involve an expenditure of $225,000. The work is in charge of James F. Brown, acting commissioner of housing.

♦ Alderman A. G. Bastis, speaking recently before the city council of Minneapolis, suggested that the board of education cease buying playgrounds and constructing new buildings until all the schools have been placed in proper repair. He criticized the school board for allowing the school plant to deteriorate to a point where it now requires more than $3,000,000 to make the necessary repairs. The question arose over a resolution asking that a council committee be appointed to work with the board of education and the board of estimate in outlining a financial program for school-building repairs.

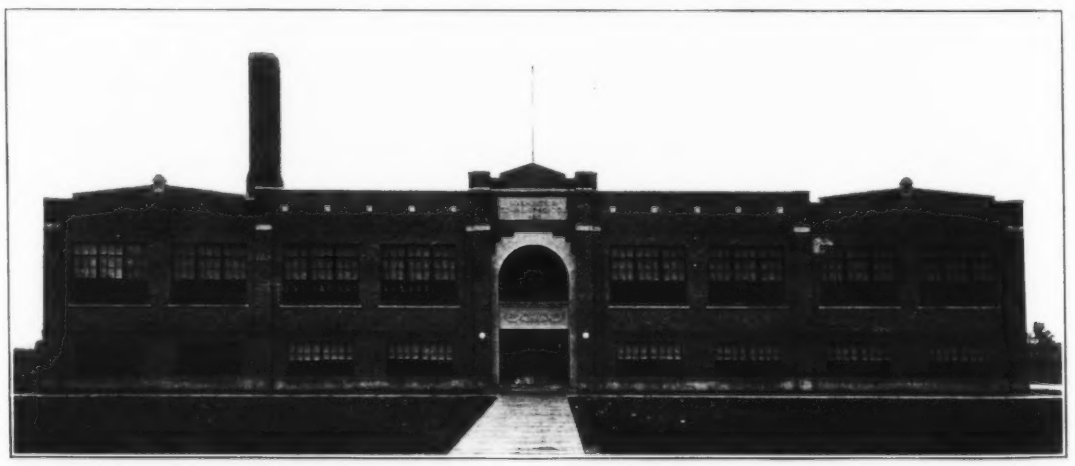
MINNEAPOLIS HOLDS SUMMER SCHOOL FOR JANITORS

The board of education of Minneapolis, Minn., has announced that the annual summer school for janitors, engineers, and custodians will be held June 15 to 20 at Minneapolis. A cordial invitation has been extended to those interested in school janitorial work to spend a week in Minneapolis and to participate in the work.

The courses of study have been arranged to carry on two training classes at the same time; one class for students who attend for the first time and who seek a general knowledge of the work; and another class for advanced students who have previously attended and who seek special training in the higher fields of janitorial work.

The training work is divided into three main divisions, as follows: (1) Housekeeping and Sanitation; (2) Heating and Ventilation; (3) Maintenance and Management.

Students who attend have the benefit of a complete staff of instructors, a selected course of work and study, a laboratory and demonstration school, and practical field work.



WASHINGTON TOWNSHIP CONSOLIDATED SCHOOL, LINDSEY, OHIO

The Washington Township Consolidated School is 126 by 95 ft. in size, and contains six classrooms, in addition to an auditorium and gymnasium. It is built in the Gothic style, with exterior walls of brick, stone trimmings, and terrazzo corridors and stairs. It is heated by means of a warm-air furnace, with automatic temperature control.

The building was built to accommodate a total of 200 pupils and cost $60,795, or 26 cents per cubic foot. The cost of the building was $57,795, and the cost of the equipment was $3,000.

The building was erected from plans prepared by Messrs. Shively & Son, Fremont, Ohio, and the contractors were Sout & Company, of Fremont.

An Extra Fraction of a Cent Buys a Book Bound to Last

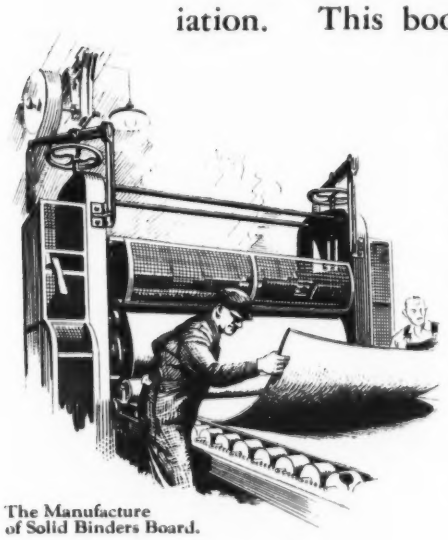
Before your book orders are finally signed for 1931 make sure that the words "Bindings of Solid Binders Board," are included in your contracts.

If you have not been getting bindings of Solid Binders Board, this specification may add a fraction of a cent to the cost of each book.

For that fraction of a cent you will obtain longer service from your books, because bindings of Solid Binders Board will long outwear those made with a substitute board.

The reason for this greater service lies in the strength and toughness of Binders Board and in the fact that it is a specialized product developed primarily for the purpose of making durable covers for books.

The method of manufacture of Solid Binders Board which gives it this strength and resistance to wear is described in a booklet—"Solid Binders Board for Durability, Economy and Appearance"—just issued by the Binders Board Manufacturers Association. This booklet also gives the results of comparative tests on Solid Binders Board and pasted chip board and proves conclusively that books bound in Solid Binders Board are bound to last longer. Copies will be furnished on request.



The Manufacture of Solid Binders Board.

BINDERS BOARD MANUFACTURERS' ASSOCIATION

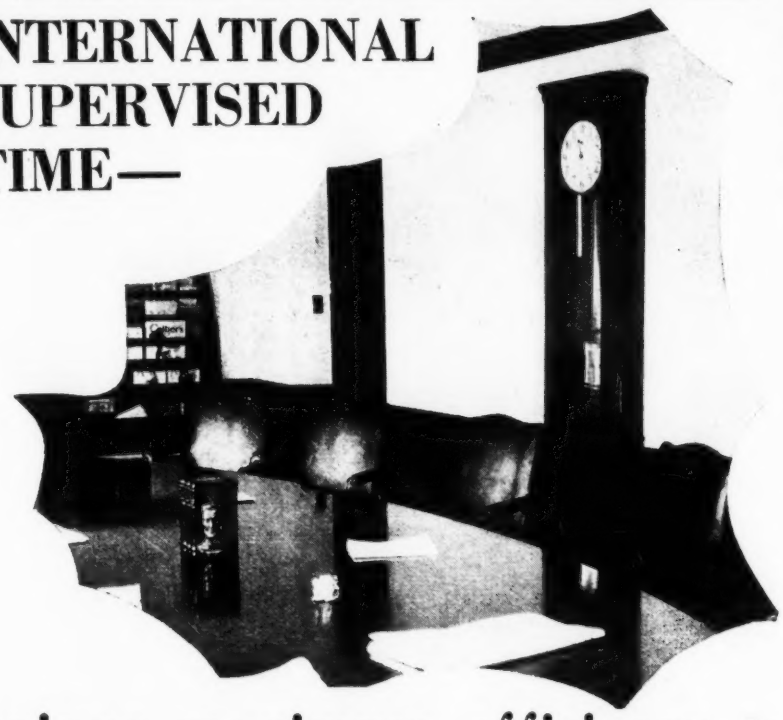
O. M. Porter, Secretary

CHANIN BUILDING **New York City**

MEMBERS:

Colonial Board Company ... Manchester, Conn.
Consolidated Paper Company ... Monroe, Mich.
The Davey Company ... Jersey City, N. J.
Fandango Mills ... Millburn, N. J.
C. H. Norton Company ... North Westchester, Conn.
Otter River Board Company Otter River, Mass.
Riverside Paper Manufacturing Company ... Glastonbury, Conn.
Waldorf Paper Products Company ... Saint Paul, Minn.

INTERNATIONAL SUPERVISED TIME—

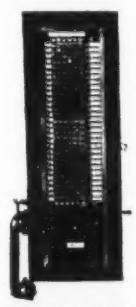


brings maximum efficiency to the operation of school schedules

INTERNATIONAL CLASS ROOM CLOCK

INTERNATIONAL CORRIDOR GONG

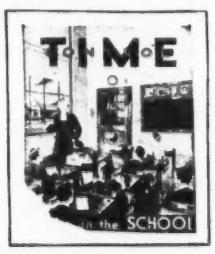
INTERNATIONAL PROGRAM CABINET



INTERNATIONAL CROSS CONNECTING BOARD

Mechanical methods to supplement the efforts of educators have proved invaluable in the attainment of maximum efficiency in school operation. The vital matter of controlling time schedules is one of the more important phases of administration that requires the precision of automatic mechanical equipment in order to operate effectively.

International meets all modern requirements with a Time and Program Control System built around the principle of AUTOMATIC SUPERVISION. This principle insures EXACT timing of class and study periods without the continual annoyance of checking clocks. The time in every room is exactly the same time all the time. Period bells ring exactly when they are scheduled—every day of the school year without variation. Precision, regularity, and model discipline supplant time waste, hurry and confusion wherever International Systems are installed.



A new booklet called "Time Control in the School" is just off the press. It explains and illustrates the advantages of International Supervised Time. Send for your copy today.

INTERNATIONAL SUPERVISED

INTERNATIONAL BUSINESS MACHINES CORPORATION

International Time Recorders and Electric Time Systems
International Electric Tabulating and Accounting Machines
Dayton Moneyweight Scales and Store Equipment
International Industrial Scales

GENERAL OFFICES
270 Broadway
New York, N. Y.

Branch Offices and Service Stations in All Principal Cities

Chicago Correspondence

A few years ago the Chicago public-school system had a system of teachers' councils which met during school hours. Only classroom teachers were permitted to participate, and their attendance was compulsory. These councils went out of existence during the stormy régime of former Superintendent of Schools William McAndrew when he ruled that they might no longer meet on school time. They have not been revived since. However, various committees of teachers, principals, and superintendents have worked, apparently without much success, to find and put into operation a type of council which would be satisfactory to all groups. Finally, Supt. William J. Bogan recommended the restoration of a conservative type of council which would permit both teacher and supervisor participation and which would take a minimum of school time, namely, four afternoons (eight clock hours) of school time per year.

The board of education has not yet adopted the superintendent's recommendation. Meanwhile, a bill has been introduced in the General Assembly to compel the board of education to establish councils limited to classroom teachers only, meeting on school time for five days during the year, and requiring that recommendations from these council meetings be published in the proceedings of the board of education.

All of the newspaper comment on this bill has been unfavorable. One classroom teacher is quoted as follows: "I attended all the council meetings when they were in vogue. They were a perfect waste of time. Some teachers alleviated the boredom by bringing fancywork or something to read. There was no inspiring speaker, there was nothing to be learned. Most of the matters discussed were trivial."

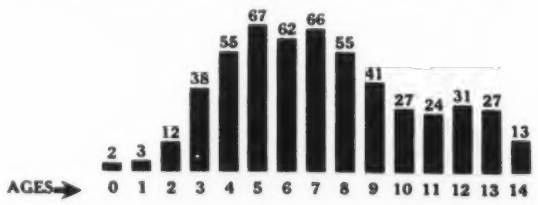
Lewis E. Myers, president of the board of education, was quoted as follows: "Notwithstanding that the bill was introduced only four days ago, I have already received letters from taxpayers and parents objecting to it.

"The closing of the schools is expensive. The disbursements of the board of education, on the basis of the 1931 budget, are approximately $356,000 a day. Five days at that rate means $1,768,000 in expense. That will be the approximate cost to the people of Chicago if the Courtney bill becomes a law.

"During the year there are 70 days of summer vacation. There is a week's vacation in the spring and another at Christmas, and the schools are closed on Labor Day, Columbus day, Armistice day, Lincoln's birthday, Washington's birthday, Good Friday, Memorial day, two days at Thanksgiving, and the day the state officials are elected. Now the Courtney bill provides for closing the schools five more days, at an approximate yearly cost of $1,800,000.

"I am told that the new rules which the superintendent and his staff have prepared provide for local councils to meet twice each semester on school time, the maximum for each meeting to be two hours. If, in the judgment of the superintendent, this is sufficient, I am ready to accept his recommendation; but I am opposed to any legislation which will add to the expense of the board of education without adequate, practical return."

The school-administration committee of the board of education has adopted a resolution opposing the Courtney bill, and recommending that the law department lobby against it.



AGES OF 523 CHILDREN KILLED IN TRAFFIC ACCIDENTS IN CHICAGO DURING 1928, 1929, AND 1930

There are 250,000 colored citizens of Chicago. For a long time they have sought in vain to have the mayor appoint one of their number to membership on the board of education. During the recent mayoralty contest they appealed to both candidates to promise to name a colored school trustee if elected.

The teachers received considerable attention in the preëlection campaign. Altogether five letters were sent to every teacher and two of them were special-delivery letters arriving the night before and the morning of election day, respectively. The reason for this attention is probably found in the oft-repeated statement that the teacher vote swung the last mayoralty election.

TEACHERS

♦ Pueblo, Colo. The local trades-and-labor council has asked the school board to refrain from its policy of employing married women teachers. In the communication, it was pointed out that the suggestion was made with reference to married women whose husbands are steadily employed at some trade or calling.

♦ Butte, Mont. The school board has approved a plan of the educational committee, providing for an eligibility list of teachers for positions in the schools, and for the selection of teachers according to their numerical rating at times when vacancies occur. The eligibility list is expected to eliminate much of the trouble now incurred by teachers who interview each board member when seeking positions.

Under the plan, the superintendent will compile the list of teachers, with the necessary requirements, and as vacancies occur, the first teacher on the list will be given the position. Those on the list one year who do not obtain positions will hold over until the following year.

♦ The Nebraska house committee on education has killed the teacher retirement bill, which provided for retirement at 60, and compulsory retirement at 70 years. It carried an appropriation of $15,000 to finance the work.

Book News and Reviews

Current Procedure in Selecting Textbooks[1]

The fact that the textbook has been a most important factor in public education in the United States must be conceded. The fact, too, that the methods employed in arriving at a choice of textbooks has not, on the whole, been the best, cannot be denied. The author here says: "The old-time method of textbook adoptions was subject to much controversy and even to vexatious scandal. The evils which arose were due to the fact that the nonprofessional factors of a school system attempted to perform a professional task. Members of the board of education listened to the arguments presented by bookmen in favor of this or that textbook, and then proceeded to vote without considering the needs of either the teachers or the pupils."

When one recalls the disturbances which afflicted school-administrative circles when textbook campaigns were staged, when commercial rivalry and high-powered salesmanship, rather than merit determined the choice of this or that book, it would seem that someone should lead the way to better ways of doing things.

The author in approaching his task is conscious of the fact that "with the development of the textbook to a new level of utility, and with many different books available for instruction in identical or similar courses, the problem of selection has become not the least of those which face the school administrator or board of school control."

In order to lay a reliable basis for a study of current methods and practices, he quotes liberally from "state statutes and city charters; rules and regulations of boards of education; policies and practices of publishers; reactions of publishers' managers and representatives; current literature on the subject; and practices commonly followed in city school systems."

In defining the place of the textbook in the American school system the author well says that "the structure and contents of the textbooks have changed to conform to the needs of the successive periods of social development. If the age requires religious reflection and theological programs, the textbooks reflect that spirit. If society finds freedom of thought and investigation best for its welfare, the textbooks reflect that attitude. Most of our teaching revolves around the textbook. This is distinctly an American practice, as compared with the European practice.

"There are special reasons why the textbook has occupied, and for a long time will continue to occupy, a position of importance with us which is unknown in those European countries where instruction is highly organized and centralized; where for generations there has been a body of carefully trained teachers; and where the yearly turnover in the teaching corps is quite small. The teachers in our elementary schools are almost entirely women; their average teaching life is but a few years. The percentage of trained teachers in most of our states is small, and the number of beginners each year is very large. As nearly all beginning teachers are textbook teachers during all their teaching days, the textbook is destined to continue to play an important part in American education for a long time to come."

While the approach to the task of choosing textbooks is largely guided by laws and regulations there are, nevertheless, individual conceptions as to the mode and manner to be employed. Certain basic considerations in analyzing and determining the value of a book necessarily obtain. They provide that:

"1. Authorship must be such as to guarantee its general soundness as to scholarship and organization.

"2. Subject matter dealt with must be chosen in the light of modern conclusions as to curriculum needs.

"3. Manuscript must be in line with forward-looking tendencies in education and not merely good in the conventional sense.

"The material must be outstanding, with distinctive features superior to special features in other similar texts. The authors should be specialists and in close contact with the problems involved, and should have taught in the grades for which the texts are intended. The method of presentation should be in accord with the best methods of the day."

Much attention is given by the author to the laws which vest the final authority in selecting textbooks. In 139 cities that authority is vested in the board of education and in 33 cities it is intrusted to the superintendent of schools. In summarizing his findings the author says:

"1. Of the 272 cities in the United States with a population from 25,000 to 250,000, only 50, or 18.3 per cent of them, are located in states with a state unit for textbook adopting. Many of these 50 cities are located in states where cities of a certain size are exempt from state control in selecting textbooks, and are allowed to select their own textbooks.

"2. The common practice in cities between 25,000 and 250,000 population indicates that the city is the logical unit for uniformity of instructional material. These cities have the authority to select their own textbooks.

"3. The authority for selecting textbooks rests with the city board of education.

"4. The board of education delegates this authority to the superintendent of schools, subject to its approval.

"5. The superintendent of schools calls upon his assistants, the actual users of textbooks, to advise him on the problem of selecting textbooks.

"6. The advisers to the superintendent of schools are usually organized into a committee."

The charge made that a pleasing personality injected into the salesmanship is a factor in marketing schoolbooks is countered with the statement that after all salesmanship means something else. It means that a bookman renders his best service when he gives complete and objective evidence of the contents of his book. The author adds:

"The American publisher would probably grant the foregoing statement, but at the same time he continues to select representatives with personality, training, and experience who can present the objective evidence of the contents of their textbooks.

"Authorship has had an influence on the selection of textbooks, and rightly so; for, as should be expected, authorship is one of the factors listed on nearly every score card."

In discussing the scope and function of textbook committees the points are made that:

"1. The superintendent of schools, who is responsible for the selection of textbooks and makes recommendations to the board of education, appoints the members to the textbook committee.

"2. The distribution of the personnel of the textbook committee is in direct proportion to the actual users of instructional material in classroom procedure. The typical committee is about one half teachers, one fourth principals, three twentieths supervisors, and one tenth administrators.

"3. Large textbook committees are not practical; the workable committee varies from three to seven members, inclusive.

"4. The efficient textbook committee is an open committee — open to both school people and the publishers."

The book contains at the end a selected bibliography, eighteen articles of which appeared in the JOURNAL.

[1]By Frank E. Jensen. Cloth, 157 pages. Published by J. B. Lippincott Company, Philadelphia, Pa.

TEXTBOOK MANUFACTURE

The United States Bureau of the Census estimates that in 1929 a total of 75,125,000 textbooks were manufactured in the country for school and college use. This amount is 29 per cent of all books manufactured during the year, and does not include so-called juvenile books, of which 36,865,167 were published, many of which were used by schools and school libraries. There is no estimate of the total number of general books in the fields of fiction, history, etc., which the schools bought for library and reference use.

During the year, a total of 30,603,012 pamphlets were also manufactured for use as school textbooks. These represent largely workbooks, primers, and similar books published in paper covers.

BOOK REVIEWS

Fact and Story Readers

By Henry Suzzallo, G. E. Freeland, Katherine L. McLaughlin, and Ada M. Skinner. Primer, 144 pages; Book One, 174 pages; Book Two, 238 pages; Book Three, 262 pages, illustrated. American Book Company, New York City.

The point of view of these new readers, which are both for oral and silent reading, is based on the necessity of applying reading to all the activities of present-day life. These activities are brought to the attention of the children through subject matter based on study in school, work, and play in the home, and contacts in the community.

Language Drill Pads

Four pads. By Nellie D. Ramaker. Price, 36 cents each. D. C. Heath and Company, Boston.

These pads provide complete drill material for grades three to six inclusive.

Elson Basic Readers

By William H. Elson, Lura E. Runkel and William S. Gray. Preprimer, paper, 40 pages; 12 cents. Primer, cloth, 144 pages; 56 cents. Book One, cloth, 176 pages; 60 cents, illustrated. Scott, Foresman and Company, Chicago.

The significant slogan of these new silent and oral readers is "life-reading service."

High School Handbook of Composition

By Edwin C. Woolley, Franklin W. Scott, and J. C. Tressler. Cloth, 285 pages. Price, $1.16. D. C. Heath & Company, Boston, Mass.

The senior author's *Handbook of Composition* has been a standard reference book for many years. In the present book the work has been simplified and adapted especially to the needs of high-school students. The new text is quite as scholarly and, in some respects, more useful than the original book.

The Drum Book

By Satis N. Coleman. Cloth, 100 pages. The John Day Company, New York City.

The history of the drum as a musical instrument is here combined with helpful suggestions for teaching drumming to young children.

Commercial Art

By Guy F. Cahoon. Boards, 184 pages. The Southwest Press, Dallas, Texas.

Books on commercial art are not a novelty. The principles, techniques, and media of drawing and painting for advertising and other commercial purposes have been described and discussed in numerous works. The present book is a distinct departure from the commercial. It considers commercial art as an occupation and suggests not only how and what the commercial artist may draw but also what the opportunities are for him in the field and what his personal knowledge, attitudes, and skills must be in order to become a successful commercial artist. The book is distinctly not written in the vein of the advertising which appears so frequently in popular magazines and which holds out impossible hopes for lucrative employment to boys and girls who may have a slight knack for drawing. The author makes very clear that at the present time commercial art is an important and difficult occupation in which there are opportunities for the serious man or woman who has developed genuine art ability and who by study and hard work is ready to apply the results of a real art education to the field of advertising and business. The author makes very clear that standards of quality and usefulness in commercial art are not measured through artistry alone, but that the making of pictures is in most cases the handmaiden of salesmanship involving a thorough study of human nature, of goods to be sold, and of tried or original methods interesting and holding attention.

The book, better than any work we have seen, puts commercial art on the basis of a productive, serious, and most useful, modern occupation which is to be entered upon as a lifework by men and women who have high motives, serious purposes, a rather broad education, and a wide understanding of men and things. The book is well illustrated with examples of modern commercial art and should be an inspiration to any young reader who has ambitions and a willingness to work. It might be read with much profit by old and tried commercial artists as a means of better understanding their important and useful occupation.

(Continued on Page 102)

(Continued from Page 100)

Mathematics for Junior High School Teachers

By William L. Schaaf. Cloth, 454 pages, illustrated. Johnson Publishing Company, Richmond, Va.

This book not only suggests the materials which are to be taught in well-rounded mathematics courses in the junior-high-school level, but it also recommends backgrounds, educational values, and teaching procedures. It will be found especially valuable for teachers who have gone into the junior high school from the grades and who are not familiar with the special problems of teaching children of junior-high-school age.

A Brief Course in Physics

By Charles H. Lake and George P. Unseld. Cloth, 474 pages, illustrated. Price, $1.68. D. C. Heath and Company, Boston.

A beginner's text for general high-school use. It emphasizes especially applications to industry and commerce.

Projects in Speech for a Foundation Course

By A. H. Monroe and P. E. Lull. Paper, 168 pages. Price, 80 cents. D. C. Heath and Company, Boston.

This is a work and project book for high-school and junior college students and is intended to provide complete material for the laboratory work of a course in private and public speaking. While the reviewer disagrees with the value of some of the source material suggested, there is no question that the exercises and projects have to deserve to be included in a "foundation" course.

The Presidents

Compiled by A. S. Cunningham. Cloth, 136 pages. A. C. McClurg and Company, Chicago.

A book of facts for the school library. Includes many data on parties, conventions, vice-presidents, etc.

Safety Programs and Activities

By Florence S. Hyde and Ruth C. Slown. Cloth, 282 pages, illustrated. Price, $1.25. Beckley-Cardy Company, Chicago, Ill.

This book outlines very carefully a plan for organizing safety work in cities and rural schools. It includes month-by-month programs for teaching safety and suggests specific facts and projects which can be used to supplement classroom and laboratory work.

Vocational Guidance and Success

By Edward J. Gallagher. Cloth, 204 pages. Price, $1.20. The Bruce Publishing Co., Milwaukee.

Based upon the fundamental principle that students must analyze their own abilities first, before forming their vocational preferences, this guide aids in the discovery of natural talents through presentation of real life situations. Health, education, morality, character, and emotional control are all evaluated in terms of vocational assets, together with suggestions for their improvement. Model investigations of the department store, mill, and newspaper office are offered, followed by general procedures for investigating any other occupation. Over 500 leading occupations are listed for study. Training of youth in rural districts is also considered. How to find, enter, and keep, the desired position are three of the important vocational problems answered here. The place of opportunity and success in business is sanely stated, while sound advice is given concerning investments and adult study. Lists of questions based on preceding material, also occasional bibliographies, add to the educational value of this vocational book.

Little Songs for Little Voices

By Geraldine M. Ryan. Paper, 32 pages. Price, 75 cents. Beckley-Cardy Company, Chicago.

For kindergartens and first grades.

A Dog of Flanders

By Louise De la Ramee. Cloth, 128 pages. Price, 60 cents. Published by the Beckley-Cardy Company, Chicago, Ill.

Crippled Children

By Earl D. McBride, M.D. Cloth, 280 pages. Price, $3.50. C. V. Mosby Co., Publishers, St. Louis, Mo.

What are the deformities from which children suffer? What are the diseases, injuries, and other causes that result in physical handicaps, deformities, and malformations found especially among young children? What means are available for curing, or at least relieving such situations? What nursing, medical, and orthopedic treatments are commonly applied in the hospital and the home?

The present book answers these questions in untechnical language for the benefit of nurses, social workers, teachers, and parents who must deal with unfortunate children. The text is informational entirely and should be of immense value to all who are concerned directly with the treatment and care of these children. Two points which the author makes will appeal to any layman: First, he says treat the deformity or malformation as early as possible after it is discovered, so that every advantage may be taken of youth, etc. Second, continue the treatment patiently and with greatest care over whatever length of time may be needed to insure permanent relief.

Everyday Good Manners for Boys and Girls

By Ernestine L. Bodt. Cloth, 128 pages. Laidlaw Brothers, Chicago, Ill.

A clever, bright book that makes the usually prosy directions for good manners at home, in school, and in public, attractive. The author has the good sense of making her rules appear reasonable and of showing the satisfactions which arise from observing them. The chapters on manners in conversation, correspondence, and at table are especially well written.

School Buildings of Today and Tomorrow

By W. K. Harrison and C. E. Dobbin. Cloth, quarto, 230 pages. Price, $16.50. Architectural Book Publishing Company, 108 West Forty-sixth St., New York, N. Y.

The title of this book describes its content: In Parts I and II, Mr. Harrison presents his ideas for modernizing the design of the school buildings for the future, and in Part II, Mr. Clarence Dobbin very completely illustrates and describes the standards of present schoolhouses in New York City.

Many architects and artists are at present engaged in the delightful occupation of conjecturing the appearance, arrangement, and equipment of the great and small buildings of the future. Most of the masterpieces produced thus on paper are variations, *ad infinitum*, of the extreme, plain architectural forms based on the simplest geometric figures and brought to the United States since the war from France and Germany; or they are developments in the spirit of the unused but beautiful design of Eliel Saarinen for the Chicago Tribune tower. Extreme ideas of fenestration and complete submission of design to functional and structural expression are further characteristics of these "unbuilt masterpieces." How many practical ideas are concealed in these interesting designs, and how closely they will meet the artistic and social ideas and ideals of our everchanging civilization only time can tell.

In the present book the discussion of the school-building design of the future has been limited to some very general considerations, from the architectural and city-planning points of view. The authors do not consider schools as definitely planned and used at the elementary, secondary, or college levels. Nor are they concerned with educational aims, class or group organization, subjects of instruction, teaching methods, etc. They do believe that television, radio, and other still unknown means will be developed for revolutionizing the schools so that "a person living in San Francisco will be able to see and talk with his teacher in New York." They argue for better light, easier circulation, attention to traffic, and for the use of new materials

(Concluded on Page 104)

While Your Plans are in the Blue Print Stage

BEFORE your library passes the blue print stage, double check the desirability of its layout. Is it practical from both the viewpoint of the students and the staff? Encourage your architect to consult a Library Bureau man. Behind him are fifty years of intimate association with library layout and construction. He looks at your plans from a standpoint of efficient administration, greater book capacity, shelf accessibility, departmental relationships—angles that the architect is often unacquainted with. More than once the elimination of a single partition by L. B. recommendation has resulted in broader room supervision and a consequent smaller staff.

Your architect, your librarian, your governing board will all benefit by L. B. experience-whether you plan the erection of an entirely new structure or the remodeling of your present quarters.

There is a Library Bureau headquarters point near you. A post card or phone call will bring an L. B. man without obligation to apply his knowledge and experience to your problems.

LIBRARY BUREAU
DIVISION

Remington Rand Business Service Inc.

HEADQUARTERS POINTS OF LIBRARY DEPARTMENT

205 East 42nd Street
New York City

118 Federal Street
Boston, Mass.

214 W. Monroe Street
Chicago, Ill.

1200 S. Grand Avenue
Los Angeles, Calif.

(Continued from Page 102)

in structure, finish, furniture, and equipment. First and last, they make a plea for original and unbiased study of the problems of school design, for freedom from unsound tradition, and a scientific and artistic approach to all problems.

In a chapter illustrating a group of modern school buildings erected in Germany, Holland, Sweden, and Denmark, examples of what may be expected in modern design in America are presented. It is interesting to note that quite a number of these schools are available only in the model. Among the photographs of completed buildings are a typical but not at all modernistic school in the Tempelhof district of Berlin, an open-air school in Holland, and a rather interesting Ursuline Institute at Taunus, Germany. All of the designs shown reflect European backgrounds and present-day ideas, based on the trend to democratic ideals in government and social life. It is difficult to believe that these designs reflect our own educational and art ideals of the future.

The greater bulk of the book, contributed by Mr. Dobbin, is so vast a contrast to the portion just described that it is difficult to see how it can be included within the same covers. On the basis of long and successful experience in planning school buildings for New York City, Mr. Dobbin presents photographs and plans of the standardized units for classrooms, laboratories, etc. These were originally developed under thirty years of leadership by Mr. C. B. J. Snyder, were revised under the short régime of Mr. William E. Gompert, and have been again restudied to meet present-day requirements under Mr. Walter C. Martin, at present architect for the New York City board of education. Mr. Dobbin is Mr. Martin's associate, who has dealt directly with the standard sitting committees of teachers.

It has not been generally acknowledged that New York was the first city to make an intensive study of the functional use of the various departments and rooms of elementary- and secondary-school buildings, and to develop definite standards of floor space, arrangement, lighting, and equipment for the growing variety of instructional rooms. It was New York City which first determined by careful study the minimum floor area to be provided for children in what may be termed conventional elementary classrooms. Similarly, it was the official architect of the New York City board of education that compelled action by teachers of chemistry, physics, woodwork, music, etc., to develop in a specific and economical way the essential physical facilities for carrying on effectively the teaching of their respective subjects. Quite naturally, the standardization of rooms has led to the standardization of corridors, floor layouts, heating and ventilation, types and materials of construction and, in the case of elementary schools, of exterior design.

Perhaps the strongest criticism that can be made of the standards thus developed in New York City has been the fact that the ultimate inclination has been to consider standards as effective for considerable periods of time. The immense number of new buildings demanded yearly as well as the complexity of the school-building programs in New York City, have made it impossible for the executives of the educational department, and even more difficult for the official architect and his associates, to consider each new school building an individual problem. Special studies of each type of room for each new high school, and at least an annual or biennial restudy of the standards for each of the rooms and special departments in elementary schools have been physically impossible.

These facts must be kept in mind in examining the details of the various rooms which Mr. Dobbin illustrates with excellent photographs and detailed plans. New York school authorities are further hampered by various local laws which compel excessive classroom ceiling height, the use of prison-made furniture of an old type, etc., and finally, there is a certain inertia which is inherent in an enormous school system, and when combined with enormous commercial and political pressure from the outside, makes radical changes and improvements exceedingly difficult.

From the foregoing, it should not be thought that the New York City schoolrooms are either carelessly designed or poorly equipped. For nearly forty years the architects' department has carried on a continuous study of the problem and has set up ideals of service and true economy that make the several rooms presented, both collectively and singly, worthy of the intensive study of any architect or school executive who has problems of school planning before him. In fact, the book is a treasure house of good ideas and splendid refinements in arrangement and economical design, that make it invaluable for anyone who desires to carry on effective schoolhouse planning.

The Teaching of Secondary Mathematics

By J. O. Hassler and R. R. Smith. Cloth, 405 pages, illustrated. Price, $2.50. Published by the Macmillan Company, New York City.

The statements on organization of content and teaching methods are practical and entirely usable. The discussions of aims are not profound but largely based on ideas of the utility of mathematics.

Teachers' Manuals for Fact and Story Readers

By Henry Suzzallo, G. E. Freeland, Katherine L. McLaughlin, and Ada M. Skinner. Primer and Book One, cloth, 288 pages. Books Two and Three, cloth, 184 pages. American Book Company, New York City.

Detailed instructions for the use of the first four books of this new and important series.

Easy Tracing Lessons in Penmanship

Paper. Price, 10 cents. Issued by R. D. Garden, 2088 Mission St., San Francisco, Calif. The sheet offers a series of tracings for teaching penmanship. It is an extremely simple method and may be conducted as a game for smaller pupils.

The Attitudes of Children Toward Law. By Earl G. Lockhart. Bulletin No. 1, August, 1930. Issued by the University of Iowa, Iowa City. The present study is confined to the investigation of the attitude of children toward law. An attempt was made to eliminate the factor of variability of attitude due to mood by using a large number of cases, a total of 3,500 children being tested. The study undertook to determine the attitude children have regarding law; to determine upon some standard attitude toward law in the situations used; to ascertain changes occurring in attitudes as the child advanced from the grades to the high school; to ascertain to what extent the factor of intelligence operated in affecting attitude toward law; to determine what influence was exerted by the socio-economic status of the home on the attitude toward law; and to ascertain the influence sex may have had on the attitude toward law. The report brought out that children gradually approach the adult attitude toward law as they advance through the grades; that the attitudes of children approach that of adults as the groups rise in the scale of intelligence; that intelligence is a factor in determining attitude toward law; that pupils of high-school age ranking high in intelligence, tend to draw away from the attitude held by adults; and that sex and socio-economic status are of no consequence in determining the attitude toward law. The study showed clearly that the attitude toward law is the same for children in all social and civic conditions, and is but slightly different from that of adults, whether lawyers, doctors, or graduate students.

Fact and Story Readers—Primer

By Henry Suzzallo, G. E. Freeland, Katherine L. McLaughlin, and Ada M. Skinner. Cloth, 103 pages, illustrated. American Book Company, New York City.

The formal primer of a valuable new series.

On *sound films,* it comes to LIFE . . .

Music now steps from the pages of a text-book. Music pictures—"The String Choir," "The Woodwind Choir," "The Brasses," and "The Percussion Group"—all provided by Electrical Research Products Inc., make this possible. When you show these talking pictures in the classroom, your pupils hear and see finished artists playing.

They learn to distinguish the tone quality of the various instruments and the place and function of each in the orchestra. Close-up photography shows playing technique, and the vividness of the entire presentation helps build a lasting appreciation of music.

Such subjects are only a small part of the educational pictures produced by Electrical Research Products. There are pictures for use in elementary school science classes, physical education, physics, mathematics, vocational guidance, teacher training.

An aid to the teacher

Electrical Research Products offers you a complete service in this modern method of supplementing the work of the teacher. It offers a complete teacher's guide in units of instruction developed for each picture. It provides the pictures. It supplies standard Western Electric reproducing equipment designed especially for the school classroom and auditorium. Send the coupon for full list of subjects, and information on how to show them in your school.

Department of Educational Talking Pictures,

Electrical Research Products Inc.

Distributors of

Western Electric

EDUCATIONAL TALKING PICTURE EQUIPMENT

ELECTRICAL RESEARCH PRODUCTS INC.
Dept. of Educational Talking Pictures, ASB-5-31
250 West 57th Street, New York, N. Y.

Gentlemen—Please send me further information regarding educational talking pictures, and how I can use them.

NAME.....

ADDRESS .....

CITY.....STATE.....

PUBLICATIONS RECEIVED

Study of Pupil Achievement and Attendant Problems. By B. W. DeBusk and R. W. Leighton. Paper, 200 pages. Bulletin No. 6, February, 1931, issued by the University of Oregon, Eugene. This study which aimed to supply certain data through the giving of standard tests and analysis of results shows the mental level of pupils in various grades, the general achievement in key subjects, the emphasis on different phases of the subjects, the homogeneity of classification of pupils, the operation of the system for grade classification, and conditions resulting from retardation and elimination. In order to minimize the wide ranges of ability and achievement levels among schools it is profitable to establish city norms for all subjects which lend themselves to accurate measurement. One norm for rapidly moving classes, and a lower norm for more slowly moving classes would be satisfactory. A summary of the suggestions provides for the establishment of a child accounting system, the use of accurate measures and diagnostic procedure, the basing of supervision upon the accounting system and diagnostic measures, the reclassification of pupils with respect to grades, and the unification of objectives in the different subject fields.

A Study of the Social, Economic, Professional, and Legal Status of the Junior College Instructor. By John T. Wahlquist. Paper, 14 pages. Reprint from *The Junior College Journal*, University of Cincinnati, Ohio. Economic rewards constitute one determinant of the caliber of the teaching personnel at any level. The professional status takes up courses pursued by instructors as well as graduate and undergraduate students, the relation of specialization to the subject taught, and the vocational plans of instructors before entrance upon present duties and for the future. The legal status involves the agencies functioning in the field and an analysis of their methods. The most significant conclusion of the study is the marked economic and professional superiority of the instructors in the public junior colleges. The inequalities of the two groups are in terms of environmental factors incident to the disparity in remuneration and in the amounts of formal education, professional training, and teaching experience.

The Bonded Indebtedness for Public Schools in Cities with a Population of Over One Million. By Walter E. Howarth. Paper, 110 pages. Issued by Temple University, Philadelphia, Pa. The purpose of this study was to make a statistical survey of the bonded indebtedness for public schools in cities with a population over one million. The study divided itself into two elements: first, the trend of the debt over a period of seventeen years, and second, the comparative statement of this debt with other factors for one particular year. As a result of the study it was noted that forty states had a limit of indebtedness, and that the amounts ranged from 2 per cent of the taxable property in Indiana and Wyoming, to 20 per cent in Nebraska. The same number of states also placed a time limit for the bonds to run. The study shows that New York, Philadelphia, Los Angeles, and Detroit find it necessary to finance their building programs through the use of bonds. On the other hand, the Chicago board of education has shown that it can raise money by taxation to pay for its schools and equipment. The recommendations are that the policy of the pay-as-you-go plan be adopted; that bonds should be resorted to only in case of an emergency, an unprecedented increase in population, and a fire or other disaster; that where bonds are issued, they should be serial bonds, and issued for a short period of ten or twenty years; that a special tax for building purposes should be a part of the regular school tax of every city; that the tremendous rise in the bonded indebtedness of New York City, Philadelphia, Los Angeles, and Detroit should be brought to a close; and that the power of cities to tax in order to pay off the bonded indebtedness should be unlimited.

A Study of the History, Uses, and Values of Apparatus in Physical Education. By Leopold F. Zwarg. Paper, 139 pages. Issued by Temple University, Philadelphia, Pa. The purpose of the study is to determine the place and the effectiveness, in the general field, of apparatus as a means of developing physical power. It is intended to aid in clarifying and delimiting the aims set forth in physical education. The study takes up group activities, individual activities, apparatus in the history of physical training, development and status of apparatus exercises in the physical-education program, objectives and values attributed to the use of apparatus, and experimental studies in the use of apparatus. The study brings out the fact that proper organization of apparatus work creates ideal situations for training in coöperation and leadership. In the physical-training course, high-school boys appear to show a greater gain in muscular strength through the use of apparatus exercises, over those who do not practice such exercises.

The Validation of the Iowa Elementary Language Tests. By H. L. Ballenger. Bulletin No. 3, March 1, 1931. The present report is an attempt to analyze the factors entering into written expression and to devise a means of getting objective data on as many of them as possible. The Iowa tests are based upon a careful study of the skills used in written language work. In their construction, consideration has been given to the studies of errors which children make, as well as to an analysis of other tests which are available. There are 12 tests, dealing with 14 skills, and containing 515 exercises. Each test is measured separately for spelling, word meaning, choice of words, correct usage, grammatical form, faulty expression, sentence structure, capitalization, punctuation, and paragraph structure. The material is intended to give language teachers and supervisors a measuring instrument to determine quickly and easily the status of the class and of the members in the fundamental aspects of language. It takes up the functions, limitations, and evaluation of the tests, and indicates the possibilities of revisions in the experimental edition which may greatly improve the validity and reliability of the tests and increase their general usefulness.

A Preliminary Report on the Use of Placement Tests in Modern Languages at the University of Wisconsin, 1928–30. Prepared by Frederic D. Cheydleur. Issued as a reprint from the *Modern Language Journal*, January, 1931. The paper takes up the characteristics, uses, composition, and status of modern language tests.

A Report on the Validity and Reliability of the Wisconsin Language Test, 1928. Prepared by V. A. C. Henmon. Issued by the State University at Madison, Wis. The testing program had for its purpose the preparation of a psychological and scholastic test, to give an indication of native capacity or mental alertness, a language test for its possible value in sectioning students in Freshman English, and modern language tests in French, German, and Spanish where the problem of placement is peculiarly troublesome. The report deals with the language test designed for possible use in classifying students in Freshman English.

Flat-Rate and Percent-of-Salary Retirement Systems. Bulletin No. 7, January, 1931, Studies in State Educational Administration, Research Division, National Education Association, Washington, D. C. A study of state-wide teacher-retirement systems, covering the flat-rate and percent-of-salary plans, with types of plans, and practical operation. The pamphlet includes numerous comparative charts and tables, and a complete bibliography, for the use of school officials.

Rural Buildings for Business and Social Uses. By Wayne C. Nason, assistant agricultural economist. Paper, 38 pages. Farmers' Bulletin No. 1622, U. S. Department of Agriculture. A new type of dual-

School Law

PROPOSED KANSAS CODE DEFEATED

The proposed revision of the Kansas school laws and their codification has been defeated by the Kansas state legislature which closed its session during the last week in March. The proposed code was the result of several years of study on the part of school authorities and committees of the state teachers' organization. The legislature refused to pass the act partly because of the taxation situation which is involved and will require further study and legislation before school laws based upon the same can be passed.

It is expected that several constitutional amendments and a number of court decisions will be necessary before the way will be cleared for the passage of the school code. The school authorities of the state, while disappointed, feel that when the tax situation and the present business depression have been cleared up there will be an opportunity for the passage of the act.

SCHOOL BOARD HAS AUTHORITY TO ASSIGN CHILD TO SCHOOL

In response to a request of the prosecuting attorney of Monroe county, the attorney general of Ohio has recently ruled that a local board of education has authority under the Ohio general code, to assign a pupil to a school, subject to the exception provided in Code 7735, as follows:

"When pupils live more than one and one-half miles from the school to which they are assigned in the district where they reside, they may attend a nearer school in the same district, or if there be none nearer, then the nearest school in another school district, in all grades below the high school. In such cases, the board of education of the district in which they reside must pay the tuition of such pupils."

The attorney general pointed out that the parent or guardian is liable to the penalties provided for violation of the compulsory-attendance law, if the child fails to attend the school to which the board has assigned him, unless he is within the exception noted, or one of the other alternative provisions of the attendance law. The point is made that a parent may not withdraw a child from school, and transfer him to another school, solely for the purpose of embarrassing the board and teachers of his own school, and without paying tuition elsewhere.

APPLYING THE LAW TO SCHOOL SOLICITORS

Two men were recently fined $50 each in the Maryville, Mo., circuit court on a charge of soliciting, while the school was in session, to subscribe for periodicals.

The text of the statute upon which the conviction was secured reads: "No agent, solicitor, peddler, or other such person shall solicit, offer for sale or sell any subscription, policy, service, article, or thing whatsoever to any teacher or pupil in any public school of this state while such teacher or pupil is upon the premises of such public school during the hours such public school is in session and for one-half hour before such school convenes and for one-half hour after such school has dismissed. Any such person violating any provision of this act shall, upon conviction, be deemed guilty of a misdemeanor."

The state educational department makes the following comment: "Teachers, new in the profession, have been imposed upon by high-pressure salesmen for many years. These teachers have been told the department indorsed the publications, that teachers' examination questions would be based on the work offered for sale, teachers must have the books if the schools were approved and that county superintendents indorsed the publications. These teachers, believing this, would sign an order and find later they had been deceived. This law was enacted to prevent this practice. Neither does the department nor county superintendents ask teachers to buy publications which any agent offers for sale. That teachers should read books and magazines is necessary, but these can be secured directly by mail, or in some way not in violation of this law.

"The teacher's time belongs to the school district. He or she should not be subject to the sales talk of agents while professional duties demand constant attention. Not only is the teacher's time consumed while listening to the agent, but his or her peace of mind is disturbed for some time after such an experience. The most important thing of the school day is schoolwork free from disturbance."

LIABILITY IN TRANSPORTATION

A recent decision of the supreme court of the State of Washington should be of interest to school districts which provide transportation. The decision, which was rendered on March 3, was on an appeal by the Carlsborg School Dist. No. 62, of Clallam county, from liability in an action for damages because of injuries and death of a pupil who had alighted from a bus and had been struck by an automobile on the highway.

In the trial by the lower court, the jury held the driver of the automobile for $3,650 damages, but did not hold the driver of the school bus, or the district responsible. The plaintiff asked for a new trial which was granted by the lower court. The decision of the supreme court reversed the latter part of the verdict of the lower court, and ordered a new trial on the question of the negligence of the driver of the school district.

The supreme court held that a carrier of school children must use the highest degree of care as applied to other passenger carriers. The court said: "If the operator of the bus without any warning, opened the rear door for the children to alight, as he testified, knowing that they would cross the highway to the south, and knowing that an automobile was approaching from the west, it could not be said as a matter of law that he was not guilty of negligence."

ABOLITION OF POSITION HELD VALID

A school board may discontinue the services of a teacher, even though this teacher is employed under the permanent-tenure law, provided the board of education abolishes the position held by the teacher for sufficient reasons. This is the decision of Hon. Charles H. Elliott, commissioner

(Continued on Page 112)

(Continued from Page 109)

of education for New Jersey, in the case of Mrs. Effie M. Wisner, against the board of education of Neptune township, Monmouth county, New Jersey.

The complaint was made by Mrs. Wisner, who had been a teacher of physical education under tenure and had been dismissed because the board of education discontinued the position and created a new position; that of director and teacher of physical education. The teacher argued that she was entitled to the new position even though it involved enlarged responsibilities and a type of duties which the old position had not at any time involved. It was held by the commissioner that the petitioner was not dismissed, but that the position had been abolished and that there was no attempt to dismiss her.

Mrs. Wisner was continuously employed by the board of education from 1902 until the close of the school year 1928. In April, 1929, Mrs. Wisner was notified that her position as teacher would be abolished, that a new position of director and teacher of physical education would be created, and that her services would therefore be discontinued.

In the hearing before the commissioner, it did not appear that the action of the board in abolishing the position was taken for the purpose of discontinuing the service of the appellant, but rather that the change was made in the interest of efficiency and economy, and that the position was legally abolished. It appeared from the testimony that the board abolished the position of teacher of physical training in the high school, and a similar position in the grades, and created the single position of director and teacher in good faith, for reasons of economy and efficiency. The appellant, it was pointed out, had no legal claim to the new position, even if she had held a certificate qualifying her for the work she had been performing. Further, she did not hold a certificate required for the new position.

SCHOOL LAW

School Lands and Funds

Housing and teaching of children of Spanish or Mexican descent in elementary grades in separate buildings without intent or effect to discriminate against races is held not unlawful.—Independent School Dist. v. Salvatierra, 33 Southwestern reporter (2d) 790, Tex. Civ. App.

School authorities have no power to arbitrarily segregate Mexican children merely because of race.—Independent School Dist. v. Salvatierra, 33 Southwestern reporter (2d) 790, Tex. Civ. App.

Classification of Mexican children for purposes of instruction was held unlawful racial discrimination inasfar as the classification was relaxed in application to other races.—Independent School Dist. v. Salvatierra, 33 Southwestern reporter (2d) 790, Tex. Civ. App.

The grading, classifying, and assigning of pupils are purely administrative functions inherent in local school authorities.—Independent School Dist. v. Salvatierra, 33 Southwestern reporter (2d) 790, Tex. Civ. App.

The court may not inquire into the reason for a school board's refusal, under statutory authority, to approve an unauthorized contract, whereby the superintendent appointed a teacher without obtaining the board's consent (La. act No. 100 of 1922).—Brown v. St. Bernard's parish school board, 131 Southern reporter 760, 14 La. App.

The courts may directly interfere with the school authorities only when they go clearly beyond their administrative powers (Vernon's annotated civil statutes, arts. 2686, 2690).—Independent School Dist. v. Salvatierra, 33 Southwestern reporter (2d) 790, Tex. Civ. App.

The courts have power in a proper proceeding to determine what the powers of the school authorities are, and whether or not the authorities have exceeded them (Vernon's annotated civil statutes, arts. 2686, 2690).—Independent School Dist. v. Salvatierra, 33 Southwestern reporter (2d) 790, Tex. Civ. App.

The courts, in the absence of an abuse, may not interfere with the discretion of a school board in adopting rules for the discipline of a school.—Bozeman v. Morrow, 34 Southwestern reporter (2d) 654, Tex. Civ. App.

School-District Property

School boards have the power to locate and to construct district schools on sites, and in accordance with plans and specifications, as in their judgment seem best suited.—Independent School Dist. v. Salvatierra, 33 Southwestern reporter (2d) 790, Tex. Civ. App.

A teacher or an employee of a school, to be prohibited from selling school supplies, must be engaged in the distribution of textbooks furnished by the state (Tex. revised statutes of 1925, art. 2876b).—Bozeman v. Morrow, 34 Southwestern reporter (2d) 654, Tex. Civ. App.

The sale of school supplies in a school cafeteria was held not unlawful, there being no showing that the sales were made in connection with the distribution of textbooks furnished by the state (Texas revised statutes of 1925, art. 2876b).—Bozeman v. Morrow, 34 Southwestern reporter (2d), 654, Tex. Civ. App.

Under statutory provisions, a school district is held liable for negligence of the officers and agents acting within the scope of authority (Rem. complete statutes, §§950, 951).—Morris v. Union High School Dist. A, King county, 294 Pacific reporter 998, Wash.

School-District Taxation

Overcrowding, bad condition of a school, and lack of adequate facilities were held not authorized to issue bonds exceeding the constitutional limit (Ky. constitution, §158).—Buckner v. Board of Education of Owensboro City School Dist., 34 Southwestern reporter (2d) 236, 236 Ky. 768, Ky.

The statute does not authorize a board of education to determine whether an emergency exists in authorizing bonds in excess of the constitutional limit (Ky. statutes, §3469a–1; Ky. constitution, §158).—Buckner v. Board of Education of Owensboro City School Dist., 34 Southwestern reporter (2d) 236, 236 Ky. 768, Ky.

Whether an emergency exists justifying the issuance of school bonds in excess of the constitutional limitation is a question of fact on which the finding of the board of education is not conclusive (Ky. constitution, §158).—Buckner v. Board of Education of Owensboro City School Dist., 34 Southwestern reporter (2d) 236, 236 Ky. 768.

The failure of the contestants of a school-tax election to show that voters, whose ballots were

(Concluded on Page 114)

An Attractive, Business-Like Desk Set for Modern Teaching

THOSE educators who seek attractiveness, flexibility, and efficiency in the classroom will approve this modern desk set by Heywood-Wakefield. It is an all wood desk set similar in design to the type which many pupils will use upon entering business careers; a desk that permits flexible seating arrangements and one which assures easy and thorough sweeping and cleaning of the classroom.

It is strong, rigid, and comfortable. The posture type of chair has a properly curved and pitched back and a deep, supporting saddle type seat. This furniture is available in a wide range of sizes, too. Consequently, it is comparatively simple to obtain a uniform, business-like appearance throughout the entire school building.

The Heywood-Wakefield Table Desk Set is built of sturdy stock; is well braced all around; and is entirely capable of withstanding the severe usage which schoolroom equipment is sure to receive. The specially designed bentwood braces add extra strength, yet are so placed that they do not interfere with the pupil's feet. Before selecting any classroom equipment, be sure to investigate this and other practical styles of Heywood-Wakefield School Furniture. A note to the nearest sales office listed below will bring you complete information.

SALES OFFICES

Baltimore, Md.	New Orleans, La.
Boston, Mass.	New York, N. Y.
Buffalo, N. Y.	Oklahoma City, Okla.
Chicago, Ill.	Philadelphia, Pa.
Columbus, Ohio	Pittsburgh, Pa.
Dallas, Texas	Portland, Oregon
Houston, Texas	San Antonio, Texas
Los Angeles, Calif.	San Francisco, Calif.
Minneapolis, Minn.	Seattle, Wash.

HEYWOOD-WAKEFIELD

(Concluded from Page 112)

rejected, were qualified did not render the ballots inadmissible.—Lewis v. Crump, 34 Southwestern reporter (2d) 616, Tex. Civ. App.

In a school-tax election contest, in the absence of an issue regarding the voters' qualifications, the presumption is, unless the contrary appears, that those who voted were qualified (Tex. revised statutes of 1925, arts. 2793, 2998–3040; Tex. pen. code of 1925, art. 216).—Lewis v. Crump, 34 Southwestern reporter (2d) 616, Tex. Civ. App.

Teachers

If a school board appoints a teacher, it cannot later remove the teacher without cause.—Brown v. St. Bernard parish school board, 131 Southern reporter 760, 14 La. App. 460.

A school board is held authorized to dismiss an auxiliary teacher who, after refusing the board's appointment, entered into a contract solely with the superintendent (La. act No. 100 of 1922).—Brown v. St. Bernard parish school board, 131 Southern reporter 760, 14 La. App. 460.

Pupils

A school board was not authorized to direct children to travel a specified route to school to entitle the parent to transportation allowance (S. Dak. laws of 1925, c. 153).—Derichs v. Lake Creek School Dist. No. 62, 234 Northwestern reporter 527, S. Dak.

A route established by a school board as the basis of transportation allowance must be along section lines or regular highways properly maintained (S. Dak. laws of 1925, c. 153).—Derichs v. Lake Creek School Dist. No. 62, 234 Northwestern reporter 527, S. Dak.

Where the distance to a school over section lines or a regular highway was more than 2½ miles, the parent was entitled to a transportation allowance even though the children followed a shorter route (S. Dak. laws of 1925, c. 153).—Derichs v. Lake Creek School Dist. No. 62, 234 Northwestern reporter 527, S. Dak.

A law prohibiting students from joining or belonging to high-school fraternities was held valid (Mich. public acts of 1927, No. 319, pt. 2, c. 33).—Steele v. Sexton, 234 Northwestern reporter 436, Mich.

A law prohibiting high-school fraternities, defined as organizations taking in members on the basis of a decision of its membership, was held not limited to secret societies (Mich. public acts of 1927, No. 319, pt. 2, c. 33, §1).—Steele v. Sexton, 234 Northwestern reporter 436, Mich.

Teachers and Administration

THE SUPERVISOR'S RELATION TO HIS PRINCIPAL AND TEACHERS[1]

R. D. Lindquist, Oakland, California

Supervisors have undertaken to perform many functions in public-school systems. These have ranged over the entire field from almost no administrative tasks, to those of traveling teachers, and everywhere they have been viewed with more or less suspicion as threatening an inroad upon existing prerogatives. The supervisors, on their part, have been anxious to clear up this ambiguity concerning their place in the scheme of administration, and to find a position that is dignified and rich in possibilities for professional growth.

In the present article, the writer attempts to define such a position. Briefly, it consists of expert advisory service, teaching, and research.

Teaching

The possibilities for service in the direction of growth and development are limited only by the supervisor's own limitations of heart and head. With an increasing recognition of its value, there should be commensurate remuneration in the way of professional status and monetary reward. Teaching implies learning on the part of the one taught, and this, in turn, requires of the supervisor:

1. That she believe in the possibility of adults learning new and better things.

2. That she recognizes in its essentials the kind of learning with which she is concerned, consisting of awareness of the problem and its solution; definition of the problem; development of a solution for the problem; and testing the solution in practice.

3. That the supervisor's task consists of helping the teacher: to become aware of the exact nature of her need; to analyze the problem involved and the solution; to work out and apply a solution; to evaluate the results of the changed procedure.

4. That success as a teacher requires among other things: that she respect the teacher's personality; that the teacher come to feel the problem as her own; that the teacher participate actively in the solution; and that the teacher experience satisfaction from successful solution of the problem.

5. That if the above is observed in spirit, as well as in letter, her work will be coöperative, creative, scientific, effective, and philosophical.

6. That her responsibility for teaching extends to principals and superintendent, as well as to teachers.

Research

Related to teaching is another service which is important, and that is research or study which results in the improvement of subject-matter selection and organization, and the materials with which children work in mastering the subject matter. It has been recognized that the only organization of subject matter which counts in the final analysis is that which is in the mind of the teacher, and that the school system will always have to carry on a program of in-service teaching by means of which they reorganize for pupil use the subject matter through which the pupil is educated. As a result, we have had elaborate organizations of teachers, principals, and supervisors, and the outcome has been courses of study of increasing bulk and impressiveness.

Many teachers find courses of study an impediment rather than a help. They lay them aside as something to read when they have time, and or-

(Concluded on Page 116)

[1]Abstract of an address before the Directors' Section, California Teachers' Association, December 15, 1930.

(Concluded from Page 114)

ganize the subject matter from day to day, as though no attempt had been made to do it in the course of study. To claim that a teacher isn't guided by the course of study, or helped by the better ones, would be an exaggeration, but it is true that she does not get as much help from it as she expects.

The solution to the difficulty is in the organization of subject matter in courses of study which will take on a slightly different aspect. Two forms are suggested as follows:

First, that it be arranged in terms of materials directly usable by children, containing suggestions stimulating to study, guidance in study, and means for diagnosis to serve as a basis for further study.

Second, that it be arranged in terms of concrete suggestions to the teachers, indicating how to deal with specific teaching situations, how to deal with problems in organization of subject matter, and other classroom situations.

The preparation and evaluation of these materials is the responsibility of the teachers as well as the supervisor, but since the latter has special training and more time, the responsibility must be largely that of the supervisor. The supervisor functions as a research worker in the needs of children and teachers, and through her study and guidance she functions as a teacher. Teaching is a distinctly professionaal aspect of the work, and whether it be teacher or supervisor or principal, growth professionally is only possible as each develops whatever capacities he or she has as teacher. Teaching is not just a didactic presentation of facts. It is rather that way of living which makes for growth in others. Teaching other lives in a creative way carries with it its own rewards such as power of analysis, faith in men and in their power to grow, sympathy, and the joy that comes from being in tune with men.

PERSONNEL SELF-IMPROVEMENT

Supt. W. Max Chambers, of Sapulpa, Okla., has made an analysis of the professional study carried on by 72 teachers in the Sapulpa schools, as a means of self-improvement and better teaching service. The 72 teachers who reported to Mr. Chambers earned an annual salary of $91,157, and during the school year 1929–30, 53 of these teachers spent a total of $9,126 for attendance at summer school, or an average of $169 each. During the same period, 31 teachers spent $1,358 for extension work, or an average of $43 each. Twelve teachers took work by correspondence, at a total cost of $203, or an average of $17 each. During the same period, 62 of the teachers engaged in some other activity involving personal advancement. These activities included attendance at teachers' conventions, etc., which cost a total of $2,703, or an average of $43 each.

The total expenditures of all the 72 teachers who reported during the year 1929–30 amounted to $13,390, or in excess of 14 per cent of the total salaries paid.

This showing is indeed a remarkable one and represents the highest possible professional spirit. In summarizing the work of these same teachers during a period of three years, it was found that they had completed 1,403 hours of university credit, and that 18 degrees had been awarded to them.

TEACHERS AND ADMINISTRATION

♦ The present oversupply of teachers in New York City, according to Supt. William J. O'Shea, will be adjusted within a year or two. "We have about 2,000 students in our training schools for teachers at the present time," he said. "They are being trained for teacherships. It is true that at the present time we have an oversupply. We have probably 2,000 young women who are unable to get employment as teachers. That is adjusting itself and, in the course of a year or two, there will be no trouble along those lines."

♦ Amherst, Ohio. The school board has taken action to eliminate married women teachers, with a decision not to reëmploy four married women next year. The action of the board is in line with a policy to give teaching positions to single women and to make room for some of the unemployed teachers. At present there is an oversupply of teachers, particularly among the recent graduates.

♦ Branford, Conn. The school board has adopted a rule, providing that a teacher who marries will be automatically dropped from the school payroll. The rule does not affect married teachers now on the staff. The board ordered that women teachers who had not reached the maximum salary be paid the usual increase of $75. The men teachers were reappointed at the same salaries which they received last year.

♦ Wellington, Ohio. The school board has voted not to employ married women teachers after this year. The rule does not affect those teachers now on the staff. The action rescinds an order of last June, when it was voted not to employ married women for the 1931 school year.

♦ Council Bluffs, Iowa. During the school year 1931, teachers will suffer no reductions in salary, and the automatic raises will be paid as usual. Monthly bonuses, however, which were formerly given for sponsoring extra activities, will be discontinued during the year. It had been customary for teachers to draw $5 per month for each extra activity which they sponsored.

♦ Somerville, Mass. Upon the suggestion of Dr. F. J. Fitzpatrick, the school board has disapproved a practice of teachers in finding employment and salaries in other departments of the city, while drawing salaries in the school department. The city auditor was asked to furnish the board with the names of teachers who are in the employ of the recreation department and the amounts of the salaries they receive. Dr. Fitzpatrick, in commenting on the practice, stated that it was necessary to get after "salary hogs," who hold down good jobs as teachers, and then work in the evening school, the recreation department, or the summer school. Such teachers continue to hold down two or three jobs, while competent young persons are unable to obtain employment in either the school or city department.

♦ Elwood, Ind. The contracts of four married women teachers were canceled by the school board following a conference with Supt. W. F. Smith. Some months ago, the board adopted a rule prohibiting the employment of married women. When the contracts were mailed, six married women teachers were eliminated.

♦ Deadwood, S. Dak. The school board has retained its salary schedule for the next year. The schedule adopted last year, will continue in effect.

Teachers' Salaries

♦ Rockford, Ill. The school board has offered contracts to 488 teachers, principals, and supervisors. The contracts carried the usual salary increases for all those under a salary schedule. The total increases for these teachers under the schedule was $34,260, and the amount of contracts was $963,930. The increase for instructional service amounted to 3.6 per cent.

♦ Williams, Iowa. The school board has made a 5-per-cent reduction in teachers' salaries. The action was taken to reduce the tax load through a reduction in expenditures.

♦ South Bend, Ind. The school board has begun a study of teachers' salaries to determine what other cities are doing regarding automatic salary-increase schedules. It was pointed out that the cost of retaining the automatic increases would be $30,000, which means an addition of 1½ cent to the school levy.

♦ West Allis, Wis. By a vote of 4 to 3, the school board has voted not to reduce teachers' salaries. During the discussion, three of the board members opposed the scheduled raises, while four other members voted to continue the system adopted in 1924.

♦ The city board of finance of Fall River, Mass., has notified the school board that all salaries must be reduced 20 per cent. The school board had previously voted a flat 20-per cent reduction for all employees until June.

♦ Holyoke, Mass. Upon the suggestion of the finance committee, the school board has adopted a reduced schedule of salaries for new teachers. The schedule affects those to be engaged hereafter, and will bring reductions of from $50 to $150 in all teaching groups. A rule allowing teachers from other cities to be engaged at their former salaries was canceled. Eventually, the schedule will effect a substantial saving in the salary account.

♦ Meriden, Conn. A definite maximum for the salaries of the principals of the junior and senior high schools has been established by the school board. The maximum salary for senior-high-school principals will be $5,000, and for junior-high-school principals $4,500.

♦ Leominster, Mass. The school board has gone on record as opposed to general salary increases this year, other than those provided for in the fixed salary schedule. Only two increases outside the schedule were given.

♦ Sheldon, Iowa. The school board has made a 5-per-cent reduction in the salaries of teachers and employees, which will result in a saving of between $2,500 and $3,000.

♦ Everett, Wash. The school board recently voted a 2-per-cent reduction in teachers' salaries. Mr. A. A. Mykland, superintendent of schools in Snohomish county, has expressed himself as opposed to reductions in teachers' salaries, and urges that a stand be taken to maintain a high grade of teachers through adequate salaries. He pointed out that few, if any, of the districts outside of Everett have contemplated salary reductions.

♦ Tacoma, Wash. Employees of the school system will undergo a temporary reduction in salaries on a percentage basis as a last resort to bring the 1931 school budget within the estimated revenue. The action was taken by the board, upon the suggestion of Mr. A. A. Rankin, after the voters had rejected the 3-mill tax levy and the Showalter Bill.

The proposed reduction provides for a cut of 12½ per cent in the salaries of employees receiving salaries of $3,000 and up; a cut of 10 per cent in salaries of $2,500 to $3,000; a cut of 7½ per cent in salaries from $1,800 to $2,500; and 5 per cent in salaries of less than $1,800.

♦ Ferndale, Mich. The school board has ordered a reduction in wages for members of the school board, teachers, and other employees of the school system. A reduction of 10 per cent in wages will mean a saving of $50,000 during the school year 1931. The order becomes effective immediately.

♦ The school board of Henryetta, Okla., has recently voted not to employ any additional married women teachers. Married women now on the staff will be retained.

♦ Salary and personal reductions amounting to 18 per cent and affecting school superintendents and supervisors of Summit county, Ohio, have been put into operation by Supt. C. A. Flickinger. A taxpayers' strike, which was expected seriously to cripple the income of the county school board, was responsible for the action. Personnel or salary cuts affecting teachers, or other school officials in the several townships will be handled by the township boards of education.

♦ Chicago, Ill. Funds of the board of education available for salaries were exhausted on April 2, with the issuance of a $3,800,000 payroll to meet teachers' salaries for the previous month. The board pointed out that there was little hope of selling the 1931 tax-anticipation warrants in time for the current month's payroll.

♦ Oshkosh, Wis. The school board has received a communication from the local teachers' association, protesting against its decision to set aside the salary schedule for this year. The board members have replied with a statement that the setting aside of the schedule is not permanent, but is only for one year.

♦ Ferndale, Mich. The salaries of all employees of the school board have been reduced 10 per cent for the current year. The reduction which becomes effective in September will save the city $50,000 for the year. The reduction affects all members of the staff from the superintendent down.

♦ South Bend, Ind. The school board has proposed a reduction in the teachers' salary schedule which provides automatic increases for teachers with certain qualifications.

♦ The school board of Franklin county, Tenn., has voted to reduce the salaries of teachers 10 per cent.

♦ Goshen, Ind. The school board has voted to set aside the automatic salary increases of $5 per month which had been granted in other years. The action was taken in view of the present financial conditions.

♦ Ann Arbor, Mich. Under a new policy of the school board, there will be no increases in the salary schedule for 1931, with the exception of those sums guaranteed in signed contracts with teachers. The salary schedule approved by the board affects 200 teachers, administrative officers, and librarians.

♦ The school board of Gratiot county, Mich., has reduced the salaries of teachers of rural schools for the year, beginning with next September. The reductions which were made in new contracts for next year, run on the average from $5 to $10 per month. In some cases, experienced teachers are being replaced with inexperienced teachers, with largely reduced salaries.

♦ Eaton Rapids, Mich. The school board has deducted $5,000 from the salaries of school teachers.

♦ Waupaca, Wis. Local business men and farmers have urged that school teachers share in the general situation which has affected all taxpayers, and that they forego increases in salary during the present year. The school officials are reluctant to reduce the salaries because they fear that the schools will be at a disadvantage in competing in the open market for teachers.

♦ Blissfield, Mich. The school board has presented contracts to the teaching staff, at a 10-per-cent reduction in salary. The total payroll for teachers amounts to $42,000 and the 10-per-cent reduction will reduce the tax rate one-half mill.

♦ New London, Iowa. The school board has adopted a salary schedule of $18,630, which represents a reduction of $3,120 from that of last year. The largest reduction in salary was in the case of the music teacher who was cut from $1,350 to $1,125.

♦ Akron, Ohio. Opposing a general salary reduction, the local teachers' association has presented a proposal to the school board, which it claims will cut $20,000 from the school operating expenses and open the way for further decreases. The association's action has been interpreted as a stroke to maintain the present salary scale. The proposal points out that extensive savings may be effected through a modification of the teacher sick-leave plan. Each teacher would be permitted only five days' sick leave, during the year, and for those days would be paid the difference between her salary and the amount paid a substitute.

♦ Battle Creek, Mich. The school board has voted to retain its present program of salary increases for the school year 1931. The action was taken after it was shown that the local salary schedule is slightly lower than the average for other cities. It was pointed out that the financial situation is practically balanced by the resignation of teachers in line for increases, and by the employment of others who come into the school system at beginners' salaries.

♦ Cleveland, Ohio. Mr. E. M. Williams, president of the school board, has announced that he is definitely opposed to a reduction in teachers' salaries because the city must be in a position to compete for the best teachers. He points out that the per-capita school costs in the suburbs is three or four times what it is in Cleveland, and that most of the criticism of the school board has come from those who live in the suburbs. He asked that the suburbs lead the way with reduced school costs and then the Cleveland schools would follow their example.

♦ Albion, Mich. The school board has effected a saving of $1,100 through a decision to give no salary increases for the year 1931. A number of other economies have been put into effect which will reduce the school tax rate by $2 on each $1,000 of assessed valuation.

♦ Ames, Iowa. The school board has adopted a number of economies which will save approximately $6,000 per year. New contracts offered to all teachers will contain no salary increases, and all teachers have been reëlected at their present salaries.

♦ Fall River, Mass. The school board has ordered a reduction of 20 per cent in the pay of all school employees. It has suspended kindergarten classes, placed ten janitors on the retired list, and suspended four others as a means of meeting a serious financial deficit. The reductions which went into immediate effect, involved 825 members of the school department.

♦ Cleveland, Ohio. A proposal to withhold salary increases for teachers on the basis of educational credits until after they have received a degree was presented at the conference of the educational committee of the school board. The proposal is in the nature of a substitute for the suggestion to cut off all increases during the coming year.

Under the former plan, teachers were given raises of $120 yearly after they had obtained fifteen credits. A teacher might have her salary raised by $240 before receiving a degree, and $120 more afterward. Under the new plan, such a teacher would be given one raise after receiving her degree.

♦ Fall River, Mass. A committee of the teachers' association has protested to the school board against the 20-per-cent salary reduction for all school employees. The mayor, as chairman of the committee, deplored the necessity of the action, but pointed out that the school board is confronted with a limited budget and must reduce all expenditures to the limit.

♦ Rockford, Ill. The board of education has reappointed its staff of teachers, supervisors, and principals for the school year 1931. In reëmploying the staff, the policy of the board was to keep the salary schedules in force for those coming under the regular schedule, and to reëmploy supervisors and administrators not under the schedule at the 1930 salary.

New teachers for 1931 will be selected from local candidates when their qualifications warrant it. Twenty-two teachers were not considered for reëmployment by reason of a policy not to employ teachers who marry. A total of 488 contracts were signed, with 469 under salary schedules, and 19 not under schedule reëmployed at the 1930 level. It costs $34,260 to keep the salary schedule in operation. The total of all contracts issued was $963,930.

♦ Delavan, Wis. The school board has voted to suspend salary increases for teachers this year. An exception is made in special cases where an agreement was made with the teacher previously.

♦ Nampa, Idaho. The school board has ordered a reduction of 5 per cent in the salaries of city superintendent, principals, teachers, and school secretaries, beginning with September 1. The teachers' contracts contain a provision whereby the board may make a further reduction of 5 per cent if the economic conditions make the action advisable. The action is attributed to an anticipated reduction of the school income.

LYON LOCKERS

1 Full Steel-Loop, Double-Riveted Hinges

2 Double-Thickness, Tubular Reinforced Doors

3 Welded Frame—Double-Thick Steel Corners

LYON METAL PRODUCTS

lead in America's Schools ... *by Thousands!*

In selecting lockers, be guided by this illuminating fact: *Where comparative tests have been made, more schools have adopted Lyon Lockers than have chosen any other type.*

The reason is not hard to find. Once you *see* the superior construction of Lyon doors ... *feel* the greater strength of Lyon hinges, frames and locking devices ... *test* the greater durability of Lyon finishes ... you will understand why Lyon Lockers sturdily outlast generations of schoolboy abuse.

Let Lyon Plan Your Installation

Lyon engineers will gladly co-operate with school boards and their architects in planning corridor and gymnasium locker installations to make the most advantageous use of space. Without any obligation. To obtain Lyon Service, address:

LYON METAL PRODUCTS, INCORPORATED
AURORA, ILLINOIS

A Typical Lyon Locker Installation

Lyon Steel Folding Chairs—extra sturdy for longer life. The ideal auditorium installation

LYON SERVICE

CORRIDOR LOCKERS · GYMNASIUM LOCKERS · CLASSROOM LOCKERS · MAP CABINETS
SUPPLY CABINETS · MANUAL TRAINING SHOP EQUIPMENT · FOLDING CHAIRS

WISCONSIN SCHOOL BOARDS MEET

Tax and legislative problems, and school administration during the depression were the main topics before the joint session of the Wisconsin State Association of School Boards and the Wisconsin City Superintendents' Association, which met at Madison, April 10 and 11. An address of welcome was extended by Supt. R. W. Bardwell. Two hundred and eleven delegates were present.

The opening address was made by Dr. William A. Ganfield, of Carroll College, Waukesha, who spoke on "That Boy of Yours and that Girl of Mine." Dr. H. M. Wriston, president of Lawrence College, Appleton, denounced the control of athletic directors and coaches in high schools and colleges by sports writers and that part of the public that want winning teams regardless of cost. He held that:

"One might almost say that sports writers make news. I have had a coach nominated and selected by a sports editor and his following, and announced before I had considered the man. Of course, I accepted the selection, since, that was the only thing left for me to do," he said jestingly.

"The athletic performance is by its very nature a public performance, and, therefore, the school cannot control in the same degree the dissemination of news and opinion about it, whereas the intellectual performance is by its very nature a private performance, and the control of publicity is entirely within the hands of the school system."

The tax and school-support questions were discussed by John C. Callahan, state superintendent of public instruction. E. G. Doudna, secretary of the board of regents of the state teachers' colleges, intimated that there is too much criticism, too much athletics, standardization, emphasis on credits and degrees, and too much attempting to control education by accrediting agencies.

"We need criticism," he said, "but we get altogether too much that is mere rancor and spleen. Much of the current criticism of schools seems to be directed at them as if they were evil things to be curbed or destroyed."

The report of a survey of "Teachers' Salaries and Depression" by B. E. McCormick, secretary, Wisconsin Teachers' Association, showed a general indication throughout the state that salaries will remain nearly the same in cities with a population of 5,000 and over.

Painting a picture of the western world in the "throes of a spiritual civics of cynicism," President Glenn Frank, of the University of Wisconsin, challenged the delegates to "come to a realistic understanding of the spirit of the age." He further held that "American liberalism" was "linking arms with American conservatism, and, with a world half in ruins and socially leaderless, content to play the rôle of critical negation. Americans were in their armchairs when they should have been in the arena."

V. A. Lundgren, Marinette, was elected president of the Wisconsin Association of School Boards; M. Halvorsen, Sheboygan, first vice-president; Miss Gertrude Sherman, Milwaukee, second vice-president; Mrs. Clara Dvorak, Muscoda, was reëlected secretary-treasurer, and Mrs. Sadie D. Strouse, Arcadia, was reëlected secretary.

Supt. G. O. Banting, Waukesha, is the new president of the Wisconsin City Superintendent's Association. Supt. W. R. Davies, Beaver Dam, was reëlected secretary-treasurer. R. E. Balliette, Antigo; G. O. Banting, Waukesha; C. E. Hulten, Marinette, and S. B. Tobey, Wausau, are the directors of the Superintendents' Association.

Committees of the Wisconsin Association of School Boards are: resolutions, Miss Gertrude Sherman, Milwaukee; Mrs. J. W. Madden, Madison, and C. O. Perry, Rice Lake.

Members of the auditing committee of the boards were J. F. Cameron, Beloit, and Mrs. Elizabeth M. Mehan, president of the Milwaukee board.

AIMS OF ASSOCIATED SCHOOL BOARDS

Members of boards of education, city, village, and district, have found that periodical gatherings in county or state units, possess definite value. Thus, a number of state and county school-board conventions are being staged each year, increasing constantly in point of attendance and interest.

In some states these gatherings are under the direct guidance of state educational departments. In nearly all states where such gatherings are attempted the state school officials lend their coöperation. Frequently they provide the program material and bring the problems of the state to the fore.

In discussing the subject R. S. Jewett, in a bulletin issued, described the aims and objectives of the Associated School Boards and Trustees of New York State. He defines them in the following language:

1. The furthering of the educational interests of the state.
2. The provision of a medium for the exchange of ideas and information.
3. The provision of an organization for increasing the influence of school boards in regard to legislation.
4. The provision of an organization for coöperating with teachers, superintendents, and the state department of education.

Mr. Jewett then explains: "Our sole aim is to coöperate for the welfare of the children. We, therefore, aim to educate our members in their duties and responsibilities as trustees and try to keep them abreast of the times in educational practice so that they will be the more ready and willing to adopt up-to-date methods. I believe that we are making real progress in this endeavor. At the close of our Syracuse meeting, one trustee said to me: "I have learned more about schools and my duties as a trustee in these two days than I ever knew before." Another said: "It ought to be compulsory for every school trustee to attend these meetings."

The desire to bring the rural-school-board member into the organization is urged as follows: "Of course, our influence in regard to legislation is measured largely by the number of boards represented in our membership. At the present time, we represent 47 per cent of the city boards and 37 per cent of the village boards having superintendents, but only 1.5 per cent of the rural boards under the supervision of district superintendents. We believe, however, that we can be of great value to these trustees and that their presence in our membership would greatly increase the prestige of the association."

School Administration Notes

APPOINTMENT OF COUNTY SUPERINTENDENTS

In opposition to the election of county superintendents by popular vote, G. O. Clough, of Georgia, says: "Expert service is not secured by means of popular vote. No corporation would consider for a minute the selection of a manager by a vote of its constituents: No banking institution would select a president by a vote of its depositors. Many cities are adopting the plan of a manager appointed by a board in preference to the plan of having a mayor elected by the people.

"An elective county superintendent's office offers no encouragement to young men and young women to make special preparation for such work."

In support of the appointive method, Mr. Clough says: "The appointment of the county superintendent by the county board is indorsed by the best authority and is rapidly becoming the practice. All state superintendents in the United States indorse this method of selecting the county superintendents. Fifty per cent of the states of the Union now provide for the appointment of the county superintendent by either the county school board or by some other board or court."

SCHOOL TRANSPORTATION IN CALIFORNIA

A study based upon the experiences made in California on the subject of school transportation is published by the Office of Education, Washington, D.C. The following paragraphs appear in the summary:

"More than 95 per cent of all the transportation is by motor bus. School ownership of busses is much commoner than the contract plan. In general, the equipment used is of a very high grade. The median price of school busses is $3,778.

"On account of the lack of any supervision or the requirement of a report, there is much difficulty in determining the cost of transportation with complete accuracy. Not more than 40 per cent of the schools are following an adequate system of accounting.

"The average cost per student per year amounts to $41.35. The average for elementary schools is $28.86 per student for each year. The average cost per mile for one bus is 22 cents. The average cost per pupil per mile is $0.007. These costs compare favorably with the reported costs from other states, but the cost per bus-mile and per pupil-mile is relatively low.

"The annual wages paid to drivers vary from $90 to $2,050. The median annual wage is $446.

"Sixty-one per cent of the bodies used on high-school busses are built separately. These have an average seating capacity of 20 per cent greater than the average of all high-school busses taken together. The cost per unit of seating capacity is $113 for bodies built separately and $122 for the entire group. Elementary-school busses with bodies built separately show an average cost per unit of $88.

"The cost on the basis of the bus-mile proves to be exceedingly variable, ranging from 11 cents to 96 cents. Such differences in cost per mile obscure all attempts to compare efficiency on this basis."

SCHOOL ADMINISTRATION

♦ The textbook fight which has been waged in Indiana for several months has come to a close. There was considerable opposition to a change in the use of schoolbooks. The books now on the list were readopted.

♦ The board of education of New York City has accepted from the Stern Memorial Foundation, through its president, a trust fund of $15,760, which is to be used for the benefit of underprivileged and handicapped school children. The trust fund was collected through voluntary donations from friends of the late Vice-president Stern within and without the school system, and is to be used for crippled, cardiac, and other handicapped children in the school system.

Under the provisions of the Stern Foundation, the annual income of the fund, except such portion as may be set aside to cover any future cost of the administration, is to be divided each year into not more than four equal parts, to constitute the Stern memorial prizes. These prizes will be awarded to underpriviliged children in the schools of New York City, selected by the superintendent of schools as most worthy of assistance and most likely to profit by such assistance. One test of worth will be the ability of the underprivileged child to progress despite his handicap.

Each recipient of a prize will be given an engraved certificate, signed by the president of the board of education and the superintendent of schools.

♦ In response to the statement made by Clara Tagg Brewer, of the Cleveland board of education, that newspaper reporters be excluded from meetings where policies are being discussed, the *Cleveland Plain Dealer* says: "We recognize the fact, of course, that the discussion of some kinds of problems is better confined to executive sessions; such as, for instance, the question of individual personnel, matters of discipline or, perhaps, salary cuts in individual cases. General policies, however, are better considered in the open. There should be nothing to conceal. One of the best assurances against unwise or oppressive policies is to have 'reporters present' when public policies are discussed."

♦ The board of education of Shenandoah, Pa., recently leased a culm bank from the Philadelphia and Reading Coal Company. They leveled the bank for play purposes, and transported by railroad and truck sufficient clay to cover the field. Next, a stadium was built around the field, with accommodations for 6,000 persons.

At the opening game, the board collected $5,183 in paid admissions, which produced profits sufficient to completely pay for the erection of the stadium. It is the only play field in the community for 25,000 persons. A total of 22 nationalities are represented in the school population.

No Clatter or Bang

When Norwest Locker Doors Close!

Part of a large battery of Norwest Lockers recently installed in the new Bryant Webster School, Denver, Colorado. Architect: G. Meredith Musick, Denver.

If you could visit one of the many schools equipped with Norwest Lockers and watch the students at dismissal or between classes, hurriedly opening and closing their lockers, you would be amazed at the quiet which prevails.

For the new NORWEST Steel Lockers are equipped with *irremovable, specially treated leather* silencers.

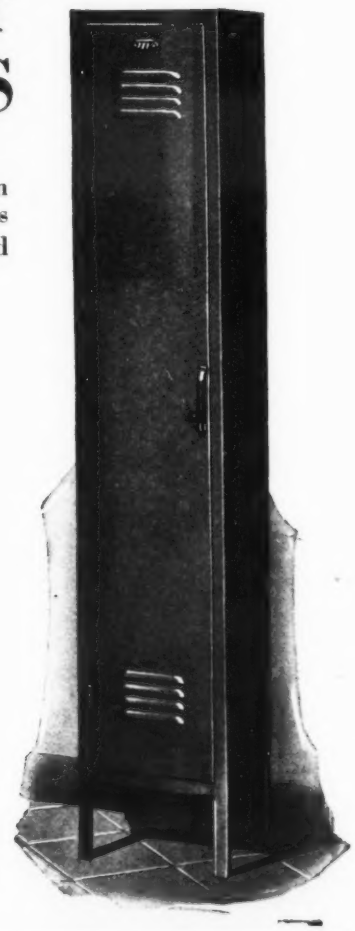
The leather bumpers at the top and bottom of the latch rod are held securely and cannot be jarred or even pried out of place. The silencers on the keepers are also irremovable — being riveted and cemented in place.

The leather is specially treated so that it cannot become brittle and hard — but always remains soft, pliable, *efficient*.

Quieter operation is only one of many advantages that make NORWEST Steel Lockers the ideal equipment for modern schools. Write for complete facts.

. . . Other NEW Developments of NORWEST LOCKERS

1. Positive Latching
2. Improved Door Construction —concealed, full loop hinges
3. Automatic Latch Rod and Handle Control



NORTHWESTERN STEEL PRODUCTS COMPANY

MAKERS OF STEEL LOCKERS, STEEL SHELVING, STEEL STORAGE CABINETS, ETC.

4545 West Homer Street, Chicago, Ill.

A SUGGESTED REORGANIZATION TO IMPROVE ARTICULATION AND PROMOTION

(Concluded from Page 40)

Another objection and one quite as serious would be to find teachers who could adjust themselves to this type of organization. All of our teachers are quite definitely trained to function in our present grade organization. To train them for this new plan would be an essential step.

Finally our materials of instruction would need to be recast in terms of pupil progress rather than in terms of grade progress. This, however, is quite as serious a problem with the Baltimore, Dalton, or any other accepted plan. It is present in any reorganization.

With the evidence so conclusively before us it is apparent that something needs to be done at once. Perhaps temporary measures are indicated. Some of us are not so much concerned with the particular plan which may be adopted for bringing about better articulation between units and more successful promotional procedures as we are with the fact that we shall recognize that these are at best temporary measures and that radical steps must be taken before a permanent cure is effected.

SCHOOL LEGISLATION IN ARKANSAS

(Concluded from Page 42)

education with permission given to those holding county licenses to continue so for a time."

In contemplating the question of school revenues it must be remembered that Arkansas is small compared with other states. State Superintendent Hirst here says: "The total expenditure for schools in our state has been about $14,000,000 annually. This legislature has provided that approximately $200,000 will be added to permanent and common-school funds each year and about $500,000 to the equalizing fund. It has been recommended that one and a half million dollars annually additional be given to a school indebtedness board which would assume the debts of all districts of the state in excess of 3 per cent of their assessed valuation and would provide sufficient funds to erect buildings in those districts that are not adequately provided with buildings and pay all debts that they would have to incur above 3 per cent of the assessed valuation — all things, of course, being done under the direction of the state board of education. The legislature was unable during the regular session to find a source of revenue to provide a million and a half dollars annually for this purpose; therefore a resolution was adopted almost unanimously by both houses to appoint a commission to make a study of sources of revenue and report to a special session which will be called early in the fall, at which time they propose to meet the situation."

The situation which confronted the educators of Arkansas was not an easy one. The attempt to remove the educational interests several notches away from the possibilities of political manipulation involves both energy and daring. The Arkansas achievement ought to find an encouraging response in other states.

EQUIPMENT, DUTIES, AND SALARIES OF SCHOOL JANITORS IN WISCONSIN

(Continued from Page 44)

be employed. In order to answer this question, as represented in practice in the schools included in the present study, all schools employing either 1, 2 or 3 janitors were distributed according to the number of rooms in the building. The data for this tabulation are presented in Table XII. It is to be observed that there is a great deal of overlapping. While the median number of rooms in schools employing 2 janitors is 24, there are 10 buildings with 24 or more rooms employing only 1 janitor, and 2 buildings with less than 24 rooms employing 3 janitors. While the median number of rooms in buildings employing 3 janitors is 31, 4 buildings with more than 31 rooms have only 1 janitor, and 7 buildings with more than that number of rooms have only 2 janitors. The buildings employing more than 3 janitors were not included in this distribution, since there were only a few. However, the inconsistencies did not stop at that point. The schools employing 4 janitors had, respectively, 33, 37, 41, and 73 rooms. Those employing five janitors had 31, 35, and 70 rooms. One school employing 6 janitors had 69 rooms; and one employing 7 janitors had 110 rooms. While it is probable that in certain cases other circumstances and other responsibilities have some influence in the matter, it is quite obvious that there is no agreement concerning the amount of work which one janitor should be expected to perform, or can perform successfully.

(To be concluded)

COMMON SENSE IN EMPLOYING THE TEACHER

(Continued from Page 46)

know whether the person has a broad knowledge of her subject. The superintendent cannot be a specialist in every branch of study. Nevertheless, it is possible to develop a technique of asking questions that will reveal whether the applicant has a scholastic foundation for her work or not. A second value which is attached is that the superintendent has the opportunity to look for evidences of the applicant's culture. A variety of facts — the magazines the applicant reads, the amusements she enjoys, her ambitions in general, and her use of English — are indicative of culture or its lack. In the third place, the superintendent has the opportunity to estimate that intangible thing, sometimes

called "personality," which indicates whether a particular applicant fits in with the various elements in force.

After the personal interview the superintendent is ready, on the basis of the available evidence, to make a recommendation to the school board. It should be emphasized that no application that is worth studying has been overlooked. The index, with the accompanying ratings, is checked to make certain that every applicant whose record is good will be brought to the attention of the superintendent.

Frequently, the superintendent is solicited by an applicant or her relatives during the teacher-placement season. Under the system used in Faribault, this solicitation is unnecessary, because the applicant's record, if good, will speak for itself. At all times, the superintendent finds it necessary to preserve a noncommittal attitude toward all applicants until all the evidence is in. This attitude sometimes has been misunderstood as indifference. Experience has amply shown that it is best to offer no encouragement to applicants until the entire process has been followed out. Occasionally a personal interview, whether arranged for or unsolicited, has been so unproductive that an application has been discarded.

The superintendent at Faribault is fortunate in that the board of education provides him with a competent full-time secretary. The board also is progressive in allowing a liberal expense account for interviewing applicants. Very able principals and department heads are also available for consultation in going over applications. The opinions of these assistants is always utilized, even though the superintendent assumes the responsibility for the final recommendations to the board.

Utility of the Plan

There is no detail in the process, unless it be the personal interview, which cannot be easily used by the superintendent of a village school, or by the principal of a consolidated school. The young superintendent, who wishes to use the plan outlined, should keep in mind that the law in every state recognizes the board of education as the employing agency. This being the case, the board has the right to employ the teachers without any advice from the superintendent. The superintendent who secures the privilege of recommending applicants to the board must have obtained the confidence of the board in his ability to make such recommendations. Such confidence does not usually come spontaneously. In the majority of cases it is the result of well-founded experience. It should be the young superintendent's ambition, however, to merit this confidence and to deserve the handling of this important duty.

Furthermore, the board of education should view with disfavor any effort on the part of its superintendent to dodge this responsibility. The board should frankly admit that it engages a superintendent to act as its executive officer and to do a specialized piece of work for which the members have neither the time nor the training. When the board has made this courageous admission, it should resolutely support the superintendent. It should support him as he impersonally eliminates the incompetent, and recommends the capable. The board need not feel that it is shirking a legal obligation in taking this stand, for it can always remove the superintendent who makes too many mistakes.

Coördination of Effort

The qualities in a teacher that impress the layman most profoundly are not her special qualifications for a specific piece of work, but rather such general qualifications as a pleasing voice, a vivacious manner, a well-groomed appearance, in short, a pleasing personality. A little reflection, however, will indicate that no amount of pleasing personality will of itself guarantee success as a Latin teacher to one prepared for teaching history.

In short, the principle of teacher selection as outlined in the method described is such that only a person trained for a given task can perform it with a minimum danger of failure. When boards of education and superintendents of schools can boldly look this fact in the face, and coördinate their efforts instead of working at cross purposes, teachers will be employed on merit only, and the educational dollar will reach more nearly its ideal work.

SAFEGUARDING SCHOOL-BOARD DEPOSITS—II

(Concluded from Page 48)

satisfactory and inadequate means of protecting public deposits.

4. Eight states, since 1907, have attempted to protect the depositors in their state banks by creating a "guaranty fund" out of which the losses in insolvent banks could be paid. This "guaranty fund" plan has been a failure in every state that has tried it and has not adequately protected the public deposits.

5. Iowa has created a State Sinking Fund for Public Deposits to protect these deposits against loss in the event of bank failures. This fund has succeeded in paying all the public deposits tied up in insolvent banks since April, 1925. The Iowa plan merits serious study and consideration.

6. State deposits, in some instances, have been given a preference when the assets of an insolvent bank have been liquidated. The smaller political subdivisions such as the county, municipality and school district, in general have not been given this right of preference. The right of preference does not apply to National banks which make no distinction between classes of depositors.

THE NORMANDY HIGH SCHOOL

(Concluded from Page 50)

a commercial department, a complete home-economics suite, drawing and music rooms. The classrooms are equipped with slate blackboards, with cork panels and cork bulletin boards. Along the second-floor corridors are single tiers of lockers.

The cafeteria seats 350 persons. It is equipped to serve the student body in two 35-minute periods, with 10 minutes to prepare for the second group. The serving of lunches at midday is accomplished by means of interlocking class periods. The cafeteria is provided with a 43-ft. counter, steam tables, glass display shelves, and cold pans. There is a dishwashing room equipped with a dishwasher, a glass and silver sink, a cooling rack, and tables for dishes.

Simplicity, refinement, and beautiful coloring contrive to make the interior attractive. The walls of the cafeteria, vestibules, and stairways are of buff brick, with a stripe of green enamel brick. The walls of the shops are of red brick, while those in the classrooms and housekeeping suite are of plaster. The woodwork throughout is painted light cream.

The floors of the two vestibules are quarry tile; the back vestibules and the cafeteria floors are of terrazzo in a verde antique green, black, and white Georgia. Classroom, laboratory, and corridor floors are covered with battleship linoleum. The woodworking shops have wood floors, the cafeteria kitchen has an asphalt mastic surface, and the other floors are of cement. The stairways are of cast iron and are equipped with safety treads.

The ventilation and heating in the buildings is thermostatically controlled.

The gymnasium which meets modern standards of utility provides for the physical education of both boys and girls. The building contains restrooms, locker rooms, and showers. The gymnasium accommodates 125 pupils at a time and has space for a swimming pool. Rooms for a school nurse, a physician, and a dentist are also provided.

The building serves as field house, and is used as auditorium and community center, until the erection of a separate auditorium and a junior and senior high school.

The vocational building and gymnasium have been erected in preference to a junior or senior high school, because the old seminary building is well adapted to academic needs, while entirely unsuited to vocational needs, and the school has never had an adequate gymnasium.

It is planned to complete the group within eight years.

The Normandy High School site is adequate for the proposed building project and is sufficient for a community play field and athletic field of generous proportions. Parking space within the school grounds is available. The campus has obtained a start, with full-grown trees bordering the walks and driveways, and there are still grounds for landscaping and beautifying the campus.

The total cost of the vocational building was $147,428, apportioned as follows: General work, $104,498.35; plumbing, sewer and gas fitting, $8,775.37; electrical work, $7,415.08; heating and ventilation, $26,740.

The total cost of the gymnasium which was $105,828.27, is apportioned as follows: General work, $83,568.25; electrical work, $3,989.25; plumbing, sewer and gas fitting, $5,971.07; heating and ventilation, $12,299.70.

INTERIOR OF GYMNASIUM, NORMANDY HIGH SCHOOL, NORMANDY, MISSOURI
Wm. B. Ittner, Architect, St. Louis, Missouri

VOCATIONAL HISTORIES OF CITY SCHOOL SUPERINTENDENTS

(Concluded from Page 58)

TABLE XIV. Lowest, Median, and Highest Salaries at Arrival at Present Level Reported by the Superintendents in Each Group

Group	Population Range	Lowest Salary Reported	Median Salary	Highest Salary Reported
I (369)	Below 2,500....	$ 350	$1,700	$2,900
II (91)	2,500– 5,000 .	540	2,700	4,600
III (63)	5,000– 10,000 .	720	3,150	5,200
IV (45)	10,000– 25,000 .	720	3,600	7,000
V (15)	25,000–100,000 .	1,300	5,000	7,000

The median beginning salaries range from $1,700 for Group I to $5,000 for Group V. This represents an increase of $3,300, an amount nearly twice as great as the median reported for the smallest city-size classification. The highest beginning salaries reported increase with some regularity from $2,900 for communities below 2,500 population to $7,000 for cities above 25,000 — a difference of $4,100.

A comparison of the median present salaries (Table IV) with the median salaries at arrival at present level (Table XIV) shows that the present positions have yielded typical salary increases, from Group I to Group V, of $400, $800, $850, $1,300, and $500, respectively.

Summary

Definite type-avenues of advancement were revealed by an analysis of the nearly 600 vocational histories. The most popular avenue of entry into the profession was through the high-school instructorship. Over three fourths of the 583 superintendents came to administrative responsibilities in their present city-size classification from but three types of positions; namely, high-school principalships (26.7 per cent), instructorships in high schools (22.6 per cent), and other superintendencies (18.6 per cent). It appears that in general the men who were able to experience their initial responsibilities in the larger communities have enjoyed somewhat of an advantage in the competition for the more desirable superintendencies over those who, either from choice or force of circumstances, entered public-school work in the smaller towns. There was a very general tendency for vacancies to be filled by men who had previously served in communities immediately lower in the population scale used in this study. The larger the community the more necessary is the master's degree in the credentials of the candidate for the city-school superintendency. The median ages of arrival as chief administrators at present city-size levels represent a somewhat regular increase from 26 years for Group I to 42 years for Group V. Advancements from the lesser to the larger responsibilities in the field of the city-school superintendency have typically required some shift from state to state. Median present salaries range from $2,100 in communities below 2,500 population to $5,500 in cities above 25,000. A comparison of the median present salaries with the median salaries at arrival, at present city-size levels show that the present positions have yielded typical salary increases, from Group I to Group V, of $400, $800, $850, $1,300, and $1,500, respectively.

THE UNIT METHOD OF TEACHING AND THE INDIVIDUAL DIFFERENCES OF PUPILS

(Concluded from Page 60)

ing ills. But the method is offered as a workable plan which, if intelligently used, will furnish to every child the kind of activity, the kind of stimulation, and the kind of guidance that will enable him to achieve that educational growth of which he is capable.

SELECTION OF HIGH-SCHOOL TEXTBOOKS IN ILLINOIS

The office of the state superintendent of public instruction at Springfield, Ill., makes an annual survey of textbook material in the public secondary schools of the state in order to obtain some idea as to the extent and variety of textbooks in use.

The survey this year included 386 public high schools scattered all over the state and enrolling from 50 to 5,000 pupils. While it does not reach all of the recognized public high schools, it results in a valuable cross section and probably includes most of the textbooks actually in use. The data prepared show the number of different texts in the various subjects as a result of this survey. The information is given in the following table:

Number of Different Textbooks Used in High Schools

Algebra	47	General science	13
Algebra	22	German	17
Agriculture	43	Greek	3
Botany	12	History—Ancient	16
Biology	12	American	16
Bookkeeping	5	English and	
Chemistry	13	World	20
Civics	37	Latin	56
Commercial geography	11	Manual training	15
Commercial arithmetic	19	Mechanical drawing	13
Commercial law	14	Music	26
Home economics	29	Physiology	14
Business English	7	Physiography	11
English literature	14	Physics	7
American literature	14	Shorthand	4
English	58	Typewriting	11
Economics	19	Spanish	20
French	37	Zoölogy	10
Geometry	38	Trigonometry	13

PERSONAL NEWS OF SUPERINTENDENTS

♦ MR. E. P. BRANSON, superintendent of schools at Long Beach, Calif., has announced that he will not accept reëlection at the expiration of his contract, which expires August 1, 1932.

♦ MR. O. E. LOOMIS has recently been reëlected as principal of the Hononegah Community High School at Rockton, Ill., with a substantial increase in salary.

♦ MR. C. L. MCDOWELL, of Afton, Iowa, has been elected superintendent of schools at Eagle Grove. Mr. McDowell had been superintendent at Afton for the past eight years.

♦ MR. L. M. FARRIN, of Putnam, Conn., has been elected superintendent of schools at Athol, Mass.

♦ MR. W. A. DRISCOLL, of Centerville, Ohio, has been elected president of the Western Ohio Superintendents' Association.

♦ MR. S. J. HANSEN, of Harmony, Minn., has been elected superintendent of schools at Benson, to succeed J. E. Anderson. Mr. Hansen has completed four years of service at Harmony.

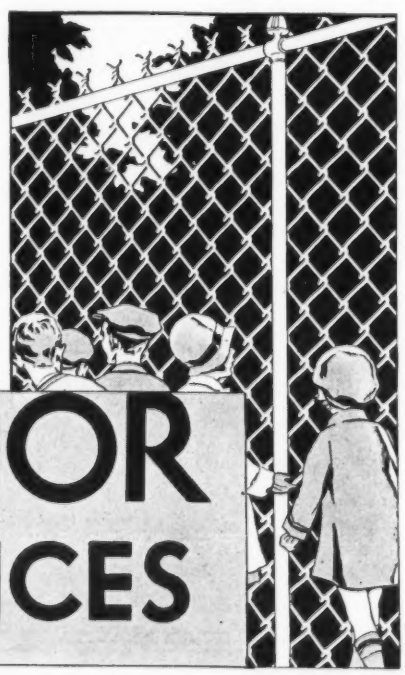
"JUST ACROSS THE STREET"

CURIOSITY—is often the cause of serious accidents. When "curiosity" commands, children will follow. Even across dangerous highways.

Curiosity cannot be controlled, but children can be kept within the bounds of safety.

An Anchor Fence is truly the Guardian of a playground: with an Anchor Fence racing feet are kept within its boundaries and safety is enforced.

An Anchor Fence Representative is located near you. Just phone or write and his services will be placed at your disposal. Or, send for a catalog.



ANCHOR POST FENCE CO.
Eastern Avenue and Kane Street
Baltimore, Maryland

Albany Boston Buffalo Charlotte
Chicago Cincinnati Cleveland Detroit
Hartford Houston Indianapolis
Los Angeles Mineola, L.I. Newark
New York Philadelphia Pittsburgh
San Francisco St. Louis Shreveport

ANCHOR FENCES

A SIMPLE PROBLEM IN ARITHMETIC

$150 F. O. B. FACTORY
Install it yourself.
It requires no servicing.

A principal rings the bells 20 times each day to call and dismiss classes, and he must watch the clock for three minutes each time before pushing the button. What is the value of the time spent in one year, figuring laborer's wages, 60¢ per hour?

20 times per day
3 minutes each time

60 minutes
1¢ per minute

60¢ per day
27 school days per month

$16.20 per month
9 months

$145.80 per year

Now, children, how much money will a program clock save during a life of forty years?

$145.80 per year
40 years

$5,832.00 saving in clock-watching time.

Built upon an 80 beat Seth Thomas movement, the Murda Program Clock is a simple, dependable device which will operate automatically all the bells in the building on from one to four separate circuits, silencing them at night and on Saturday and Sunday. No expert servicing is ever required on its simple mechanism. Initial expense is low and cost of upkeep is negligible.

Write us for descriptive literature.

THE MURPHY-DAVIS SIGNAL COMPANY, INC.
631 Jackson Street, Topeka, Kansas

FOR *POSITIVE* KEY CONTROL

TELKEE
TRADE MARK

—the Visible Key-*FILING*- -
- - Key-*FINDING* System

TELKEE is serving thousands of Schools and Colleges throughout the country for the orderly care of keys.

TELKEE Devices are so simple and so flexible in their application that they meet every key filing problem from the smallest to the largest requirement.

In the TELKEE Visible System all keys are protected in steel filing units controlled under one lock by persons with authorized access. Write for complete description.

Thayer TELKEE TRADE MARK *Corporation*

114 E. 17th Street, Los Angeles, Calif.

TEACHERS' SALARIES IN 86 CITIES

A preliminary study of teachers' salaries in cities of 100,000 population and upward, as issued by the research division of the National Education Association, indicates that the salaries in these cities remain unchanged at least for the present. Of the 86 cities which reported, the lowest minimum salary for classroom teachers in the elementary grades is paid at Evansville, Ind., which offers $900 per year to teachers holding the minimum license. The highest minimum salary for women teachers is $1,608, which is paid in New York City. The highest minimum for men teachers is $2,016, which is paid in the city of Boston. Tulsa is a close second to Boston, with a minimum salary for men of $1,900. The highest ordinary maximum salary in the group is $3,600, which is paid by the city of Newark. Supermaximums are offered in 26 of the cities. Here again, the city of Boston pays the highest salary to men, in providing that they receive $3,888.

The median salaries which are a better indication to the actual salaries received by the teachers vary considerably in the various communities. They are as follows:

The lowest median salary is at Jacksonville, Fla., which offers $1,165. The highest median salary is $2,525, which is paid at St. Louis, Mo.

In the junior high schools, the lowest minimum salary is $950, which is paid at Salt Lake City. The highest minimum salary, which is $2,100, is paid at Jersey City, N. J. The highest minimum for men teachers is $2,016, which is paid at Boston. Tulsa is a close second with $1,900. The lowest minimum salary, $1,500, is paid at Norfolk, Va., and at Flint, Mich. The highest minimum salary for women teachers is $1,600, which is paid in Tulsa, Okla. The lowest minimum, $1,000, is paid in Norfolk. The highest maximum for men teachers is $3,072, which is paid in Boston, and the lowest maximum is $1,900, which is paid in Norfolk. The highest maximum for women teachers is $2,650, which is paid at Tulsa, and the lowest maximum is $1,800, which is paid at Lynn, Mass. The highest supermaximum is $3,888 paid at Boston, and the lowest is $1,750, paid at Miami.

In the senior high schools, the lowest minimum salary is $950, paid at Salt Lake City, while the highest minimum, $2,200, which is paid at Jersey City and Newark, N. J. The highest minimum for men teachers is $2,050, paid at Worcester, and the lowest is $1,400, paid at Peoria. The highest minimum for women teachers is $1,728, paid at Boston, and the lowest is $1,100, paid at Flint, Mich. The highest maximum salary is $4,600, paid at Newark, N. J., and the lowest is $1,400, paid at Miami, Fla. The highest maximum for men teachers is $3,888, paid at Boston, and the lowest maximum is $2,300, paid at Norfolk, Va. The highest for women teachers is $3,072, paid at Boston, and the lowest is $1,900, paid at Peoria.

The highest supermaximum is $4,200, paid at Pittsburgh, and the lowest is $1,750, paid at Miami, Fla. The highest median is $4,000, paid at Newark, and the lowest is $1,415, paid at Tampa.

F. M. AMBROSE
Ginn & Company,
Boston, Massachusetts

Fred M. Ambrose, who was for many years a member of the firm of Ginn & Company, textbook publishers, in Boston, died on April 3, at his home in South Bayfield, at the age of 73.

Mr. Ambrose was a graduate of Dartmouth College. He started his publishing career in Boston with Ginn & Company. He was a trustee of Dummer Academy in South Bayfield, and a member of the Sons of the Revolution.

THIRTEEN PRINCIPLES OF SCHOOL ACCOUNTING

(Concluded from Page 62)

thing except a debt which the school has already assumed. As it avails nothing to depreciate an asset unless a reserve is established, and as it is considered a dangerous act to create a reserve into which cash is actually paid, the practice of depreciating the assets of a school district cannot be justified. It is much better to carry the assets at cost until they are discarded. They should then be marked off the books.

♦ Freetown, Mass. Teachers in the city schools will have their salaries reduced by 10 per cent, beginning with September 1. Teachers entitled to the annual increase of $50 to $75 for summer-school work will receive the increase before the reduction goes into effect.

♦ Mt. Clemens, Mich. The school board has voted to suspend the teachers' salary schedule for the next school year. The action was taken because of an anticipated decrease in school revenues.

♦ Bay City, Mich. The school board has voted to withhold the approaching school-year salary increases provided under the salary schedule. The action of the board means that the teachers will receive the same salary during the 1931 school year that they now receive. It is the first step in the direction of a reduced school budget for the year.

Drastic Fall in Bond Interest Rates[1]

Harold F. Clark, Ph. D., New York

The school-bond index is interesting reading for any school superintendent facing a bond issue. One of the largest declines in recent years in bond interest rates occurred during the month of March. What makes the decline all the more important is the fact that bond interest rates were already at a fairly satisfactory level.

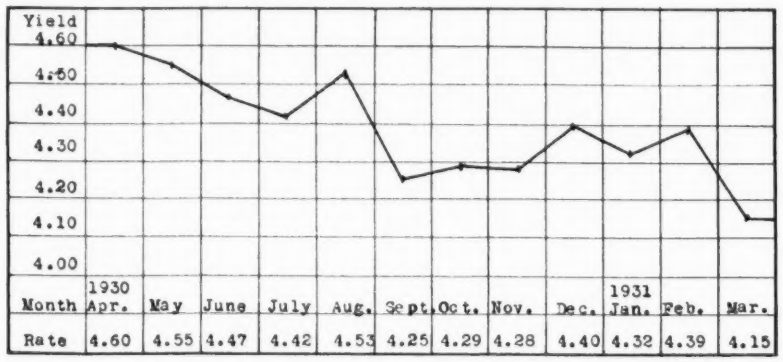


TABLE I. AVERAGE PRICE OF ALL SCHOOL BONDS SOLD DURING THE MONTH

The average interest rate on all school bonds sold during the month of March was 4.15 per cent. This compares with an average rate of 4.39 per cent during the previous month. School bonds are now approaching the lowest point they have reached since the war, and what is even better news, barring some unforeseen developments, interest rates will move to even lower levels. An additional fall in interest rates equal to the fall during the month of March, would put school bonds in a fully satisfactory selling position. As has been stated before, when the average rate on school bonds falls below 4 per cent, bonds may be definitely considered at a satisfactory level.

To add to the amazement of the sales during the past month, the low point of 3½ per cent was crossed by more than one bond issue. Two school districts in Massachusetts actually sold school bonds at a net interest rate of less than 3½ per cent. One issue was actually sold at the almost unbelievable price of 3.37 per cent. One must go back to the easy money of the early part of the century before he can find many comparable issues. Interest rates are definitely low when bonds can be sold for less than 3½ per cent and when the index for all sales drops below 4 per cent.

TABLE II. Amount and Yield of Bond Issues

1. School bonds during the month[1] of March....$	36,538,000
2. All municipal securities sold during the year (to date)	447,000,000
3. All school bonds outstanding (estimated).....	3,265,000,000
4. Average yield of all school bonds outstanding (estimated)	4.62%
5. Yield of school bonds of ten large cities.....	4.18%
6. Yield of United States long-term bonds..... (Quotation the middle of April)	3.19%

[1]The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

It so happens that along with this great improvement in bond prices there went a great increase in bond sales. March was one of the largest months on record in regard to the total of school-bond issues sold. The total for the month was well over $35,000,000. The total of all municipal bonds as well as school bonds was also one of the largest for any month on record. In both cases the large amount was due to the unusual size of New York City issues. New York City sold a bond issue of $100,000,000, $25,000,000 of which was school bonds.

Bond interest rates have now reached such a level that one would be justified in issuing long-term bonds. Those districts that have attempted to use short-term financing and various other expedients to avoid the necessity of issuing during periods of high interest rates, may well consider long-term issues at this time.

School bonds sold during the last week in March show a further drop to the sensational level of 4.06 per cent. It is quite true that the first week in April showed some slight increase, but there is no reason to think it is permanent. Even though bond interest rates have reached the level that a school board would be fairly justified in issuing long-term bonds, this is not to be taken to indicate that prices may not go even lower. There is still a great surplus of money in New York City, much of which is lending, day by day, on rates from 1½ to 2 per cent. According to the Federal Reserve bulletin, very short-term Treasury certificates were selling on the basis to yield less than 1 per cent during certain days in the past month. As long as short-term money rates remain this easy, there will be a very definite tendency for long-term bonds to increase in their interest yield.

It is perhaps true that the greatest improvement in price has come in the highest-grade bonds. There was an uncomfortable number of school bonds sold during the past month at interest rates of more than 5 per cent. The great demand for high-grade bonds is well illustrated by the bond sale of New York state early in April, which sold at the exceedingly low level of 3.46 per cent. It may not be unreasonable now to hope that some city will sell an issue of school bonds at a net interest rate of 3 per cent. If that day does arrive — there will be no further discussion of the matter — bond interest rates will be low.

TABLE III. Bond Sales and Rates[1]

Year	*School*	*Municipal*	*All Public and Private*	*Year*	*Municipal*
1929	230*	1,432*	10,194*	1929	4.67*
1928	218	1,414	8,050	1928	4.45
1927	266	1,509	7,776	1927	4.49
1926	260	1,365	6,344	1926	4.61
1925	323	1,399	6,223	1925	4.58
1924	288	1,398	5,593	1924	4.26
1923	206	1,063	4,303	1923	4.76
1922	237	1,101	4,313	1922	4.81
1921	215	1,208	3,576	1921	5.18
1920	130	683	3,634	1920	5.12
1919	103	691	3,588	1919	5.04
1918	41	296	14,368	1918	4.90
1917	60	451	9,984	1917	4.58
1916	70	457	5,032	1916	4.18
1915	81	498	5,275	1915	4.58
1914	42	320	2,400	1914	4.38

[1]By special permission based upon sales reported by the Commercial and Financial Chronicle.
*Not final.

TABLE IV. Average Yield of Long-Term Federal Government Bonds[1]

Month	*Rate*	*Year*	*Rate %*
1931		1928	3.437
April	3.31*		
Mar.	3.35*	1927	3.464
Feb.	3.40	1926	3.544
Jan.	3.33	1925	3.797
1930		1924	4.010
Dec.	3.34	1923	4.298
Nov.	3.32	1922	4.301
Oct.	3.34		
Sept.	3.37		
Aug.	3.38		
July	3.37		
June	3.37		
May	3.41		

[1]Taken from Federal Reserve Bulletin.
*Not final.

TABLE V. Security Prices and Yields[1]

Date	*Average Price of 404 Stocks (1926 Average = 100)*	*Average of 60 Bonds*	*Average Yield of 60 High-Grade Bonds*
1931			
Apr.	120.5*	100.2*	4.39*
Mar.	121.6*	99.9*	4.41*
Feb.	119.8	99.4	4.44
Jan.	112.3	99.6	4.43
1930			
Dec.	109.4	97.8	4.55
Nov.	116.7	99.1	4.46
Oct.	127.6	100.0	4.41
Sept.	148.8	100.0	4.41
Aug.	147.6	99.6	4.43
July	149.3	98.7	4.49
June	152.8	98.2	4.53
May	170.5	97.9	4.54

[1]As reported by Standard Statistics Company, Inc. Used by special permission.
*Not final.

Table IV shows the continued decrease in yield of long-term Federal Government bonds. Except for the fact that Federal financing will have to be altered slightly for purposes of bonuses and other reasons, this rate of decline probably would have been faster.

Table V shows the trend of general security prices and commercial and industrial bond yields. There does not seem to be any evidence that security prices are going to increase rapidly enough to absorb money from the bond market in any large amount. This factor, of course, must always be watched. It is more than likely that stock prices will move along in a general range in which they have been operating for the past few months. Bond prices, on the other hand, give definite indication of crossing the one-hundred mark and proceeding even higher. This, of course, means a decrease in the yield of the bonds.

TABLE VI. Revised Index Number of Wholesale Price
(United States Bureau of Labor Statistics. 1926 = 100)

Month	*All commodities*	*Building Materials*	*Year*	*All commodities*	*Building Material*
1931			1928	97.7	93.7
Apr.	74.9*	80.9*	1927	95.4	93.3
Mar.	75.2*	81.4*	1926	100.0	100.0
Feb.	75.5	81.8*	1925	103.5	101.7
Jan.	77.0	82.9	1924	98.1	102.3
1930			1923	100.6	108.7
Dec.	78.4	84.4			
Nov.	80.4	85.6			
Oct.	82.6	85.8			
Sept.	84.2	86.4			
Aug.	84.0	87.4			
July	84.0	88.9			
June	86.8	90.0			
May	89.1	92.9			

*Not final.

Table VI shows that commodity prices are still falling. This applies to all commodities and to buildings as well. The prices of building materials have reached a level that would certainly justify building at this time. With interest rates and building materials both low, there is every reason why there should be a very decided saving in the cost of school buildings, if any care at all is used.

SCHOOL FINANCE NOTES

♦ Tacoma, Wash. After a long caustic session, the school board, on April 3, adopted resolutions, reducing the budget to within $10,000 of the estimated yearly income, and adopted a blanket "temporary" reduction in teachers' and other employees' salaries. The salary cuts came in a resolution by Director A. A. Rankin, seconded by Mrs. Rhoda Miller, and voted for by both with Director Sam Stocking. Two members, John H. Binns, and Dr. Griffith refused to vote.

The resolution provides a reduction of 12½ per cent for salaries of $3,000 and over; 10 per cent for salaries of $2,500 to $3,000; 7½ per cent for salaries of $1,800 to $2,500; and 5 per cent for salaries under $1,800 if the recipient is entitled to a scheduled raise. All deductions will be made after the automatic increases provided for have been allowed.

♦ Sunnyside, Wash. The school board, at a recent meeting, discussed plans for a reduction in school expenses during the next year. Among the contemplated economies are the elimination of athletics, a reduction in salaries, elimination of school busses, and discontinuance of textbook purchases. The teaching staff will be reduced by one teacher.

♦ The school board of Portland, Oreg., is relying on the approval of a tax levy of $1,275,000 on June 2 to relieve the financial situation. Approximately 150 teachers will be out of employment if the voters fail to approve the levy. It will also be necessary to reduce the school term and the salaries of teachers.

♦ Olympia, Wash. The school board has adopted a tentative budget, calling for an expenditure of $250,000 for the school year 1931. Of the total budget, 75 per cent represents the expenses of instruction, including teachers' and principals' salaries, and expenditures on books, supplies, and materials used in instruction.

♦ Cuyahoga Falls, Ohio. Supt. W. H. Richardson has begun work on a retrenchment program for the next school year, which is expected to effect a saving of $5,000. The reductions in operating costs will be made without endangering the efficiency or service of the schools.

♦ Wetumka, Okla. The board of education has adopted plans for a 10-per-cent reduction in expenditures during the next year. The action has been necessary to meet a decrease in funds due to a decrease in property valuations.

SCHOOLROOM DAYLIGHTING

(Concluded from Page 65)

floor area is desirable to produce good daylighting at the inside of a schoolroom, it is at once apparent that several things can be done to the window wall design to insure or to jeopardize the relation. Indiscriminate reduction of window areas to produce an architectural effect will necessitate, in some cases, a considerable use of artificial lighting with its not inconsiderable energy cost. Increased use of windows in schools with an increased effect of being out of doors may do much toward quieting the unrest which is so evident among children who, consciously or unconsciously, resent being deprived of their natural play spaces.

IMPROVING SCHOOL TRANSPORTATION

(Concluded from Page 45)

more comfortable are being studied by both van drivers and superintendents.

SANDUSKY COUNTY SCHOOLS
Sandusky County, Ohio
CONTRACT

TRANSPORTATION OF PUPILS OF.....
.....SCHOOL DISTRICT.

THIS CONTRACT, made and entered into this.... day of ..... 193... by and between the Board of Education of ..... School District, Sandusky County, State of Ohio, party of the first part, and ..... of the County of ..... State of Ohio, party of the second part, Witnesseth:

That the said party of the first part, the Board of Education of the ..... School District, County and State aforesaid, agrees and binds itself to furnish ..... to the said ..... party of the second part, for the purpose of conveying children in the said school district to and from the said ..... school for the period of ..... months, twenty days to the month, beginning on.....193.... and continuing for the specified time.

The said ..... agrees to furnish ..... necessary to convey the children to and from school and to ..... himself or to have ....., a person acceptable to the party of the first part, with a certificate as required by law. It is also agreed the ..... will start from ..... and shall follow ..... roads to the school building, and shall convey all pupils of legal age on said routes, or within lawful distance of same (Sec. 7731) to said school building, who shall be in attendance at said school or who shall desire to enter said school, stopping at such places as may be designated by the party of the first part for receiving and unloading pupils.

It is also agreed that no children with ..... of said school shall be permitted to ride in said ....without consent of Board of Education.

The Board of Education of ..... School District agrees to pay said ..... the sum of ..... ($.....) per month for his services as stated above, said sum to be payable at the end of each month, and said .... is at all times subject to the direction of the Principal of said school, and said Board of Education reserves the right to discontinue said service and ..... at any time should the service prove unsatisfactory, or whenever the schools may be closed because of an epidemic of disease.

Each party to this contract agrees to the specifications hereinafter given as follows:

SPECIFICATIONS

First—The driver must start from the further terminal of his route at such time as will enable him to reach the schoolhouse not later than ..... A.M., provided, however, that no pupil be loaded before ..... A. M.

Second—The driver shall make a full stop at each railroad crossing, that one competent pupil leave bus and signal driver to cross and make sure that no trains are approaching from either direction. (Sec. 7731–2 G. C.)

Third—The driver must be at the schoolhouse at ..... P.M. to receive his load, or at such other times as the Board of Education or Principal may direct. (Time schedule to be formulated by Principal and driver and subject to radification of Board of Education.)

Fourth—The driver is required to keep his ..... under shelter when not in use, and exercise care in preserving it.

Fifth—The driver shall keep the ..... in a sanitary condition and well ventilated at all times.

Sixth—The driver shall seat the pupils in the ...., subject to the approval of the Principal, and see to it that proper conduct is maintained on the .....

Seventh—Should any pupil persist in bad conduct on the ..... it shall be the duty of the driver to disqualify the pupil from riding, and the pupil so disqualified shall not be permitted to ride again until permission is given by the Board of Education.

Eighth—The driver shall furnish bond for the faithful performance of the stipulations of this contract that pertain to his duties in a sum to be fixed by the Board of Education, with sureties acceptable to them.

IN WITNESS WHEREOF we have hereunto set our hands on the day and date above mentioned.

.....
Board of Education

....
President Contractor

.....
Clerk

BOND

KNOW ALL MEN BY THESE PRESENTS, that we ..... as principal and ..... and ..... as sureties, are held and firmly bound unto the Board of Education of .... School District, Sandusky County, State of Ohio, in the sum of ..... Dollars ($.....) for the payment of which we jointly and severely bind ourselves.

The condition of the above obligation is this: That the said contractor has this day entered into the above contract to transport pupils as indicated in said contract. Now, if the said contractor shall well and truly perform the condition of said contract, on his part to be performed, then this obligation shall be void; otherwise it shall remain in full force and virtue in law.

Bond approved this, the ..... day of ....., 193....

.....
Contractor

....
President Surety

....
Clerk Surety

♦ Pontiac, Mich. Teachers on the staff will receive no increases, or reductions, in salary during the next year, according to action of the school board. New teachers will be appointed at lower salaries, but teachers on the staff will not be reduced.

THE SCHOOL-BUILDING PROGRAM OF SYRACUSE

(Continued from Page 67)

Addition to Eastwood utilized for junior high school ultimately when new high school in northeast section is built	600
Addition to Onondaga Valley for junior high school	500
Porter (additional room when new elementary-school program recommended for that section is carried out)	500
Junior high schools in central section of the city	1,500
Capacity including present facilities	9,350

Diagram 3 has been developed to show the program proposed. Each junior-high-school center is located near the center of a circle having a diameter of two miles. This standard which is generally accepted for junior high schools enables a city to maintain a unit large enough to be economical, and which is within walking distance of children in the district served. Present centers are utilized except for the north part of the city, where a new plant is recommended, and the central part where two centers may be required unless an exceedingly large junior-high-school plant is to be erected.

The Elementary Schools. With the new construction of recent years and the proposed segregation of all seventh- and eighth-grade pupils in junior-high-school centers, the elementary-school situation became relatively simple. Provision must be made for the difference between a present registration of 25,000 (including some seventh- and eighth-grade pupils) and an estimated seating requirement of 27,000 (excluding all seventh- and eighth-grade pupils) by 1940. The removal of 2,600 pupils now attending seventh and eighth grades in buildings not junior-high-school centers will provide seating space for an equal number of elementary-school children. New construction must then be provided for 1,500 to 2,000 children, exclusive of the replacement of the obsolete structures now housing 3,000.

Like all of the older cities the lack of a definite plan has resulted in much haphazard building with expensive and inexcusable overlapping. Diagram 4 constructed with circles having ½-mile radii about their respective buildings illustrates this graphically.

Diagram 5 shows an ideal plan which might have been realized had it been adopted about 1900. (The circles constructed with broken lines show where new elementary-school plants must be located within the next decade.) All but four of these are replacements with new locations.

A detailed study was made of each section of the city, including population, school-registration changes, and forecasts, changes in racial composition, types of dwellings, and types of industry. On the basis of such a study the building needs of each section were carefully laid out.

Diagram 6 is typical of this planning. It shows a situation in which two schools are designed to replace one in a rapidly growing region. This is typical of all sectional studies. In several sections two schools are combined. In one instance an obsolete building is to be replaced by erecting additions to plants near by already built. At that, no child will have more than one mile to travel.

The problems presented are not materially different from those existing in many cities. The unusual feature, if any exists, is the acute secondary schoolhousing problem which the city faced after it had boldly attempted to handle its elementary-school situation adequately. Further, the territorial additions to the city included secondary schools which required consideration in the formulation of any adequate building program.

Financing the Program Proposed

The city administration of Syracuse is responsible for the entire city tax levy including the levy for the schools. It is responsible for floating all bond issues, including those for the erection and equipment of school buildings. The city council also approves the acquiring of sites and the erection of school buildings.

The author of this report coöperated with the research workers of the Mayor's Advisory Committee in compiling its ten-year financial program. The advisory committee was composed of leading business and professional men, and their technical workers were experts from the School of Citizenship of Syracuse University.

The report estimated the cost of capital improvement projects submitted by the various city departments for the ten-year period at approximately $60,000,000, in which school buildings constituted a portion of the investment. The Mayor's Advisory Committee proposed that school construction be gradually placed on a pay-as-you-go basis, and suggested the early application of the policy to other regularly occurring capital expenditures.

In the report, elementary-school construction was estimated at $500 per pupil, and secondary-school construction at $800 per pupil. The estimate up to and, including 1937, was $7,000,000, exclusive of sites. With the addition of sites and equipment this involved an expenditure of approximately $1,000,000 per year. Part of the amount was made necessary by additions to the school plant and the balance by replacements. It was found necessary to include $1,000,000 per year from 1937 to 1940 inclusive, for replacement and new construction, based on an estimated annual increase of 700 pupils and replacements for an annual average of 300. Some territorial additions were anticipated.

In addition to the buildings suggested for replacement, the city has a number of other buildings, which are antiquated and lacking in many of the essential features of modern school plants. It will be necessary to make some modifications of these structures to make possible

(Concluded on Page 142)

CLEAN AIR IN SCHOOLS

IS AN OBLIGATION DUE BOTH PARENTS AND CHILDREN

ALERT and eager, they file into your rooms each morning. *Your* children for the school hours of the day. Their minds, looking to the teachers you have chosen for guidance. Their bodies, entrusted to the protection of the buildings you have provided. You have shielded them from cold by a modern heating system. You have gone deeply into the matter of guarding their eyes with correctly placed windows and adequate electric lighting.

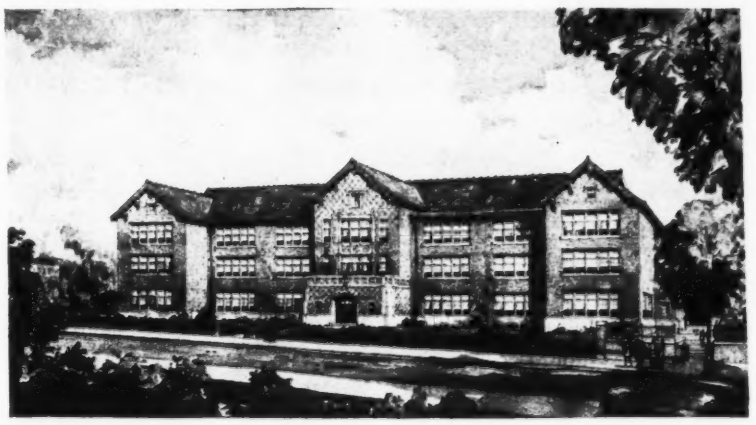
Are you protecting them, too, from the bacteria-laden particles of dust that continually besiege city buildings? Are you supplying them with fresh, clean, germ-free air that checks disease, stimulates mental efficiency and prevents restlessness?

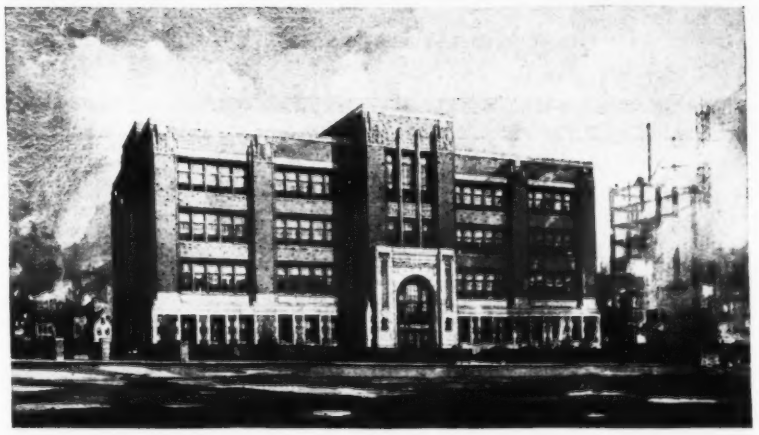
Throughout the country, rapidly increasing numbers of school boards insist upon a system of air filtration, regarding it as essential as heating, plumbing and lighting.

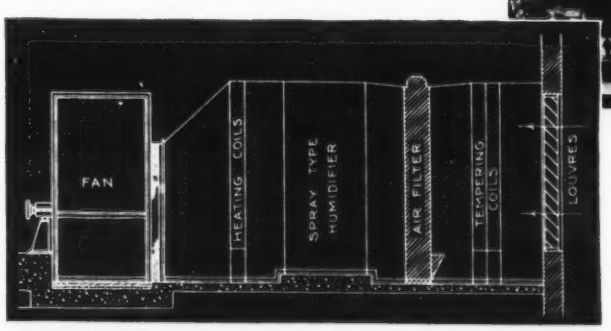
Filtered Air Decreased Absenteeism in Duluth

Typical of the results that follow the installation of air filtration in schools is the report from Duluth. The A. C. Nielsen Company, Engineers, found, by a survey conducted in the Endion School, that absenteeism decreased 13.8%. Fuel savings amounted to $714.00 annually. Savings in redecoration came to $105.00 per year, and cleaning requirements were cut 75%.

Such savings in student health and property upkeep are as important to your schools as to the schools of Duluth. Write us, without obligation, for information that will show you how American Air Filters will raise the figures on report cards and lower figures on school budgets. AMERICAN AIR FILTER COMPANY, *Incorporated*, General Offices, 108 Central Avenue, Louisville, Ky. Factories, Louisville, Kentucky, and Bradford, Pennsylvania.







A typical layout of air conditioning equipment in the schools of St. Louis. Air filters installed by American Air Filter Company, world's largest manufacturers of air-cleaning equipment

THREE EXAMPLES OF ST. LOUIS' MODERN SCHOOL SYSTEM

The three beautiful new buildings on this page are the Gundlach, the West Belle and the Herbert Hadley Schools of the fine system of Public Schools in St. Louis. Each of these buildings is kept free of dust, dirt and bacteria by American Air Filters. The architect for these buildings was Mr. George W. Sanger. Mr. Ernest T. Friton is Commissioner of School Buildings.

AMERICAN AIR FILTERS

(Concluded from Page 140)

the carrying out of a modern program of elementary education.

The following section taken from the report of the Mayor's Advisory Committee indicates the method of financing the school-building program:

This brief analysis of the problem shows that if the city continues to have a steady growth the board of education will need $1,000,000 a year. This figure is not too high if the amount of the school bonds issued in the past ten years is an indication of what will be needed in the future. The school bonds issued since 1919 are as follows:

1919	$ 535,000
1920	515,000
1921	604,000
1922	1,024,000
1923	1,253,000
1924	1,350,000
1925	900,000
1926	1,270,000
1927	1,360,000
1928	880,000
	$9,691,000

This table shows that an average of $969,100 in bonds were issued each year for school buildings and sites.

The next question that arises is how will the ten million dollars for school buildings be secured, without unduly increasing the tax rate or creating a large outstanding debt. It is the consensus of opinion among students of government that all recurring capital expenditures should be met from current revenue rather than from bonds. To do otherwise is not only to favor a single generation of citizens with a low tax rate, but to create a correspondingly large debt, which is actually never retired, and upon which interest must be paid in perpetuity. It might be stated that this report does not propose that all regularly recurring expenditures for capital projects be financed from taxes at once, but it is believed that all of the money for school construction should eventually come from taxes. It is proposed that this change be introduced gradually by increasing each year the amount to be raised from taxes.

If no school bonds were to be issued in the next twenty years, the present debt would be retired in 1948. However, if the present policy is continued, namely, that of issuing one million dollars annually in 20-year serial bonds at 5 per cent, the city will be paying $514,536 in interest on school bonds alone in 1938, and the debt outstanding will be $11,508,851.

Again, if this policy were continued to 1948, the interest payment would exceed the $1,000,000 bond issue. In other words, the taxpayers will be paying double the cost of the improvement. The problem, therefore, is to reduce the amount of interest payments. It is proposed that beginning with 1929, $50,000 be raised from taxes and $950,000 from bonds. The amount to be financed from taxes will increase $50,000 each year and the amount of bonds issued will decrease in the same proportion so that in 1938 one half of the total amount will be included in the tax levy. In order to reduce further interest costs it is proposed that bonds be issued for a term of 15 years beginning with 1939, and a 5-year term beginning with 1944. In 1948 the entire $1,000,000 will be included in the tax levy and the school debt now outstanding will have been paid.

In figuring the interest on future bond issues it was assumed that bonds would be sold at 5 per cent interest in the fall of each year.

The savings to be effected in financing school construction according to the method presented will be more evident after 1938 when interest payments will decrease rapidly. Thus in 1953 the last payment will be made on principal and interest charges. It is apparent that the only way to reduce debt charges is to reduce the interest or to reduce the interest and principal. This may be accomplished in either of two ways, by reducing the term of the bonds; or by reducing the amount of bonds issued, paying for the improvement by taxes; or a combination of these two. The latter method is proposed.

Follow-up Work

Those responsible for the building report have been made responsible for handling the details of its consummation. To the director of the study is delegated specifically the task of compiling all data in connection with any new construction. In the light of the educational aims, and the program of education planned to realize those aims, he must lay out the schedule of rooms and equipment. In other words, the director prepares the educational specifications and coöperates with the architect during the preparation of the preliminary sketch plans and the working drawings and specifications.

ADMINISTRATION

♦ In accordance with a city ordinance providing for daylight saving, all clocks in the New York City schools were set forward one hour on Sunday, April 26. Daylight saving time will continue until September 2, when all clocks will be set back an hour.

♦ The Ohio State Board of Control has released $15,000 to the state department of education to be used to supplement the $50,000 fund appropriated for relief for school children by the Lowery bill. The appropriation has been distributed to 491 school districts in 46 counties, 9 cities, and 10 villages for relief of 34,500 school children.

♦ The Dean of Lehigh University has presented a report to the principal of the Liberty High School, Bethlehem, Pa., in which he shows the progress of students at the University, who were prepared at the high school. Lehigh University maintains high standards in scholarship, and it is an achievement to be able to meet the requirements of the institution.

For the present college year, 89 students who were prepared at the Liberty High School were in attendance. Of this number, 87 have met the scholastic requirements of the University satisfactorily. Two students dropped out of their classes.

High honors have come to three graduates of the Liberty High School during the present college year. In the state-wide tests given by the Carnegie Foundation to college students in the state, Miss Eleanor Mumbauer, of Moravian College, stood second in Latin, in a test in which more than 5,000 students participated. In the tests in German, Mr. Floyd Heller stood first, with Miss Kathryn Dimler second.

♦ St. Paul, Minn. The school-bond issue and charter amendment was defeated at the special election held on April 7. The proposal polled a negative majority of a little less than 10,000. The defeat of the proposal will result in a postponement of needed buildings, and will require a reduction in some of the present school activities.

♦ Elk City, Okla. The school board has completed the erection of a gymnasium and a classroom building.

The new Washington High School, Lorain, Ohio, painted throughout with Barreled Sunlight.

Their Business Manager chose interior paint in a *businesslike way* . .

THE Board of Education at Lorain, Ohio, had completed a new high school. They were in the market for interior paint. So they secured samples of eight "standard makes." Tested them carefully. And then chose Barreled Sunlight.

"Tests were made," they say, "for hiding qualities, covering power and ease of application."

True enough, Barreled Sunlight *does* spread over a larger area, has greater hiding power, is easy to apply. But in the opinion of many users these qualities, while highly desirable, are a secondary consideration.

Marked resistance to dirt . . . a high degree of light reflection . . . ease of washing . . . these are the characteristics that explain Barreled Sunlight's popularity with school boards the country over.

For further information, and a sample panel, mail the coupon.

U. S. Gutta Percha Paint Co., 44-E Dudley Street, Providence, R. I. Branches: New York—Chicago—San Francisco. Distributors in all principal cities. (Distributors for Pacific Coast, W. P. Fuller & Co.)

BOARD OF EDUCATION
BUSINESS DEPARTMENT
LORAIN, OHIO

W. A. PILLANS
BUSINESS MANAGER

REPLYING TO

SUBJECT

DATE November 15, 1929

U. S. Gutta Percha Paint Co.
Providence, R. I.

Gentlemen:

After testing eight standard makes of interior wall paint, we chose Barreled Sunlight for our High School.

Tests were made for hiding qualities, covering capacity and ease of application.

We are highly pleased with the results obtained.

Very truly yours

W. A. Pillans.

Business Manager

WAP:MP

Barreled Sunlight

Reg. U. S. Pat. Off.

Easy to Tint

Any desired shade is obtained by simply mixing ordinary colors in oil with Barreled Sunlight white. Quantities of five gallons or over are tinted to order at the factory without extra charge.

U. S. GUTTA PERCHA PAINT CO.
44-E Dudley Street, Providence, R. I.

Please send us further information and a panel painted with Barreled Sunlight. We are interested in the finish checked here.

Gloss ☐ Semi-Gloss ☐ Flat ☐

*Name*_____

*Street*_____

*City*_____ *State*_____

Personal News of Superintendents

♦ Mr. William F. Geiger, superintendent of schools of Tacoma, Wash., has announced his resignation after completing twenty years of service in the local schools. The resignation followed the results of the recent school election, in which two antiadministration men were elected to the school board. Mr. Geiger went to Tacoma in 1911 as a high-school principal, and became superintendent of schools in January, 1913. During his incumbency, Mr. Geiger saw the achievement of a splendid school-building program, and the reorganization of the school system. The changes in the school system met with considerable opposition and won him many enemies who sought to discredit his work and elect to the school board members who were opposed to his policy.

♦ Mr. Cleo C. Cummings has been reëlected for a third term as superintendent of schools at Sutton, Nebr.

♦ Mr. J. Sommer has been reëlected as superintendent of schools at Elba, Nebr.

♦ Mr. I. W. Eber has been elected superintendent of schools at Plymouth, Nebr.

♦ Mr. George DeWolf, of Creston, Iowa, has been elected superintendent of schools at Downers Grove, Ill.

♦ Mr. George Anselm, of Cornell College, Mt. Vernon, Iowa, has been elected superintendent of schools at Mt. Vernon.

♦ Mr. F. E. Corbin, who has been a school official for 45 years, the greater part as superintendent of schools at Southbridge, Mass., will retire at the end of the school term in June, having reached the compulsory retirement age. Mr. Corbin came to Southbridge from Dudley, after completing his studies at Dudley Academy in 1886. When he became superintendent, succeeding J. T. Clark, there were less than 100 pupils enrolled in the schools. Now there are 4,000 pupils enrolled. The high school has an enrollment of 400 students, as compared with 50, forty years ago.

♦ Mr. Slater Bartlow, Jr., of Huntingburg, Ind., has accepted a position on the staff of the state education department at Indianapolis. Mr. Bartlow will retain his connection with the local schools until the end of the school term in June.

♦ W. W. Borden, superintendent of schools at South Bend, Indiana, has refused a one-year reëlection and has submitted his resignation. Formerly, he had been offered a three-year contract. The board of education had criticized Mr. Borden for permitting an essay contest in the lower grades on the temperance question.

♦ The school board of Noblesville, Ind., will not offer definite contracts to Fred M. Starr, superintendent, and to E. V. Rutherford, principal of the high school. The board has given the tenure law as the reason for continuing the officials without a written agreement.

The resignation of Supt. W. W. Borden, of South Bend, Ind., is deplored by the *Indianapolis Times*. It said: "Under the superintendency of Borden the schools of South Bend have been elevated to new standards of efficiency. The teaching profession and citizens who believe that the schools should be kept out of politics should be interested in the case of Borden. Is the time here when any man who protests in behalf of the people is to be crucified?"

♦ Mr. I. B. Bush, of Charleston, W. Va., has been elected superintendent of the schools of Loudon District, Kanawha county, which includes the schools of South Charleston. Mr. Bush is well known in the state, having served as superintendent at Hinton and Parkersburg, and Erie, Pa.

♦ Charles M. McDaniel, formerly superintendent of schools at Hammond, Ind., died at his home in Chicago on March 22. Mr. McDaniel was a native of Indiana and served as superintendent at Hammond for thirteen years. He was a graduate of Wabash College and served as a trustee for eight years. Mr. McDaniel had filled various administrative positions in the State of Indiana and was a former president of the state teachers' association. The funeral service took place at Crawfordsville, his birthplace, on March 24.

♦ Mr. F. L. Mansur, of Walpole, Mass., has been elected superintendent of schools at Swampscott.

♦ Mr. O. C. Gallagher, for the past twelve years superintendent of schools at Brookline, Mass., has presented his resignation, effective on September 1.

♦ Supt. T. A. Gustafson, of Granite Falls, Minn., has been reëlected for the coming year, with a substantial increase in salary.

♦ Mr. E. V. Cushman has been reëlected as principal of the Sherburne Central School, at Sherburne, N. Y.

♦ Mr. M. H. Hogan, of Howard, S. Dak., has been elected superintendent of schools at Beresford.

♦ Mr. C. R. Dustin, formerly principal of the high school at Tecumseh, Mich., has been elected superintendent of schools, to succeed O. W. Laidlaw.

♦ Mr. Harold Hanson, of Freeman, S. Dak., has been elected superintendent of schools at Parkston.

♦ Supt. C. B. Vernon, of Marion, Iowa, has been reëlected for a term of two years.

♦ Supt. T. R. Roberts, of Independence, Iowa, has been reëlected for another year, after completing fourteen years of service in the schools.

♦ Supt. J. H. Shipton, of Marengo, Iowa, has been reëlected for a seventh consecutive term.

♦ Supt. F. B. Lynch, of Sigourney, Iowa, has been reëlected for another year.

♦ Mr. C. A. Bielby, of Athens, Mich., has been elected superintendent of schools at Gladwin. He succeeds C. A. Walker, who goes to Yale.

♦ Supt. L. B. Sayre, of Goldfield, Iowa, has been reëlected for another year.

♦ Mr. F. W. Johansen, of Cherokee, Iowa, has been elected superintendent of schools at Clarinda. He succeeds E. C. Duncan.

♦ Mr. J. M. Logan, of Eagle Grove, Iowa, has been elected superintendent of schools at Creston.

♦ Mr. J. M. Rankin, Jr., has been elected superintendent of schools at Ralls, Tex., to succeed A. B. Sandear.

♦ Supt. L. C. Thomas, of Shattuck, Okla., has been reëlected for another year.

♦ Supt. O. G. Holmes, of Harrison, Ark., has been reëlected for another year.

♦ Supt. S. E. Rice, of Barnesville, Minn., has been reëlected for a ninth consecutive term.

♦ Mr. John J. Forester, of Ridgewood, N. J., has been appointed director of reference and research at Montclair, to succeed E. L. Tink, who has resigned.

♦ Supt. Edward F. Honn, of Prescott, Ariz., has been reëlected for a new three-year term. Mr. Honn has completed a three-year term.

♦ John Allen, 35, president of the board of education of Dansville, N. Y., died of injuries received in an automobile accident.

♦ Mr. H. H. Henry, of Centralia, Wash., has been elected superintendent of schools at Grandview, to succeed J. N. Gilkey.

♦ Mr. A. L. Ray, of Harrington, Wash., has been elected superintendent of schools at Mabton, to succeed T. C. Anderson.

♦ Supt. J. M. Reed, of Fostoria, Ohio, has been reëlected for a three-year term at a salary of $3,900 the first year, $4,000 the second, and $4,100 the third.

♦ Supt. Theodore Saam, of Elgin, Ill., has been reëlected for another year.

♦ Supt. E. O. Shaw, of Henryetta, Okla., has been reëlected for a new term of three years. Mr. Shaw is completing his fifth year as head of the school system.

♦ Supt. W. P. York, of Coffeyville, Miss., has been reëlected for another year.

♦ Mr. C. L. Murray, of Lagrange, Ind., has been appointed head of the state school-inspection department. He takes up his new duties on July 1.

♦ Mr. O. T. Kent, of Odon, Ind., has been elected superintendent of schools at Noblesville.

♦ Supt. W. C. Jones, of Dalton, Ga., has been reëlected for another year.

♦ Miss Edna Durland, of Clarendon Hills, Ill., has been elected superintendent of schools at Aberdeen, S. Dak.

♦ Supt. Arthur Campbell, of Franklin, Ind., has been reëlected for another year.

♦ Supt. E. C. Westphal, of North English, Iowa, has been reëlected for another year.

♦ Mr. J. E. Anderson, of Benson, Minn., has been elected superintendent of schools at Mankato.

♦ Supt. W. W. Meyer, of Harvey, Ill., has been reëlected for another year.

♦ Supt. F. J. Share, of Dakota City, Iowa, has been reëlected for another year.

♦ Supt. Don May, of Rock Valley, Iowa, has been reëlected for another term.

♦ Mr. Elmer Cowan, of Alexander, Iowa, has been elected superintendent of schools at New Hartford.

♦ Supt. A. J. Jones, of Nora Springs, Iowa, has been reëlected for his eighth consecutive year.

♦ Prof. Albert P. Weiss, 51, chief of the sociology department of Ohio University, Columbus, died on April 3 of heart disease. Professor Weiss although bedridden for more than a year, continued the direction of his department and guided his students in their studies. He was widely known as a writer on psychology.

♦ Supt. C. E. Beck, of Columbia City, Ind., has been reëlected for another year.

♦ Mr. C. M. Walker has been elected superintendent of schools at Dyersburg, Tenn. G. D. Stephenson was elected principal of the high school.

♦ Supt. C. J. Patterson, of Cadiz, Ohio, has been reëlected for a two-year term.

♦ George Macklin, of Laurel, Nebr., has been elected superintendent of schools at Niobrara.

♦ L. R. Potts, of Columbus, Ohio, has been elected superintendent of schools at Moundsville, W. Va. He succeeds J. C. Shreve, who retires on July 1.

♦ Supt. O. C. Sutherland, of Bellevue, Iowa, has been reëlected for another term.

♦ Supt. L. D. Frederickson, of Cylinder, Iowa, has been reëlected for another year.

♦ Supt. John McBurney, of Onawa, Iowa, has been reëlected for another year.

♦ Supt. J. W. Hadley, of Barclay, Kans., has been reëlected for another year.

♦ Superintendent Carpenter, of Scranton, Kans., has been reëlected for another year.

♦ Supt. N. E. Viles, of Neosho, Mo., has been reëlected for another year.

♦ Supt. Charles S. Meek, of Toledo, Ohio, has been reëlected for a new term of four years. He was elected to the superintendency in 1921.

♦ Supt. Stanley Adkins, of Aurora, Minn., has been reëlected for a third consecutive term.

♦ Supt. L. B. Williams, of Bordulac, N. Dak., has been reëlected for another year.

♦ Supt. Q. L. Wright, of Gregory, S. Dak., has been reëlected for his eighth consecutive term.

♦ Supt. G. E. Hoffman, of Allison, Iowa, has been reëlected for another year.

♦ Supt. M. M. McIntire, of Audubon, Iowa, has been reëlected for a new term of two years.

♦ Supt. W. S. Young, of Springfield, Tenn., has been reëlected for another year.

♦ Mr. E. H. Drake, of Kalamazoo, Mich., was tendered a dinner and presented with a life membership in the N. E. A., on the fifteenth anniversary of his service as superintendent of schools. The presentation of the life membership pin was made by Miss Ruth Eaton, president of the local teachers' club.

♦ Supt. F. C. Bates, of Frankfort, Mich., has been reëlected for another year.

♦ Supt. M. Bacon, of McIntire, Iowa, has been reëlected for another year.

♦ Supt. A. J. Jones, of Nora Springs, Iowa, has been reëlected for his eighth consecutive term.

♦ Supt. Arthur H. Naylor, of Port Jervis, N. Y., has been reëlected for another term with an increase of $300 annually.

♦ Mr. C. A. Walker, of Gladwin, Mich., has been elected superintendent of schools at Yale.

♦ Supt. J. L. Breckenridge, of Hood River, Oreg., has been reëlected for a new three-year term.

♦ Supt. R. B. Knight, of Wetumka, Okla., has been reëlected for his sixth consecutive term, beginning with July 1.

♦ Mr. C. A. Williams, of Emery, S. Dak., has been elected superintendent of schools at Slayton, Minn.

♦ Mr. O. B. Phillips, of Tyndall, S. Dak., has been elected superintendent of schools at Luverne, Minn.

♦ Mr. M. P. Gaffney has been elected superintendent of the new Trier Township High School at Highland Park, Ill., to succeed the late F. E. Clerk.

♦ Mr. F. W. Morgan has been elected superintendent of schools at Stuart, Iowa, to succeed L. E. Castle.

♦ Mr. O. E. Domian, of Fulda, Minn., has been elected superintendent of schools at Farmington, to succeed F. B. Adams.

♦ Supt. F. G. Jones, of Pine City, Minn., has been reëlected for another year.

♦ Ralph Sorenson has been reëlected superintendent of the consolidated school at Pemberton, Minn.

♦ Supt. F. B. Benzing, of Harcourt, Iowa, has been reëlected for the next year.

♦ Supt. V. B. Wiley, of Dover, Del., has been reëlected for another year.

♦ Mr. H. W. Harvey, of Okaton, S. Dak., has been elected superintendent of schools at Thornton.

♦ Supt. M. J. Channer, of Guttenberg, Iowa, has been reëlected for another year.

♦ Supt. L. N. Hungerford, of Volga City, Iowa, has been reëlected for another year.

♦ Mr. H. T. Shell, of Quimby, Iowa, has been elected superintendent of schools at Brooke.

♦ Mr. H. E. Northey, of Keosauqua, Iowa, has been reëlected for a third term.

♦ Mr. Dewey Stabler, of South Haven, Mich., has been elected superintendent of schools at Lawton, to succeed R. E. Cortauche.

♦ Mr. Paul Johnson, of Northwood, Iowa, has been elected superintendent of schools at Fredericksburg.

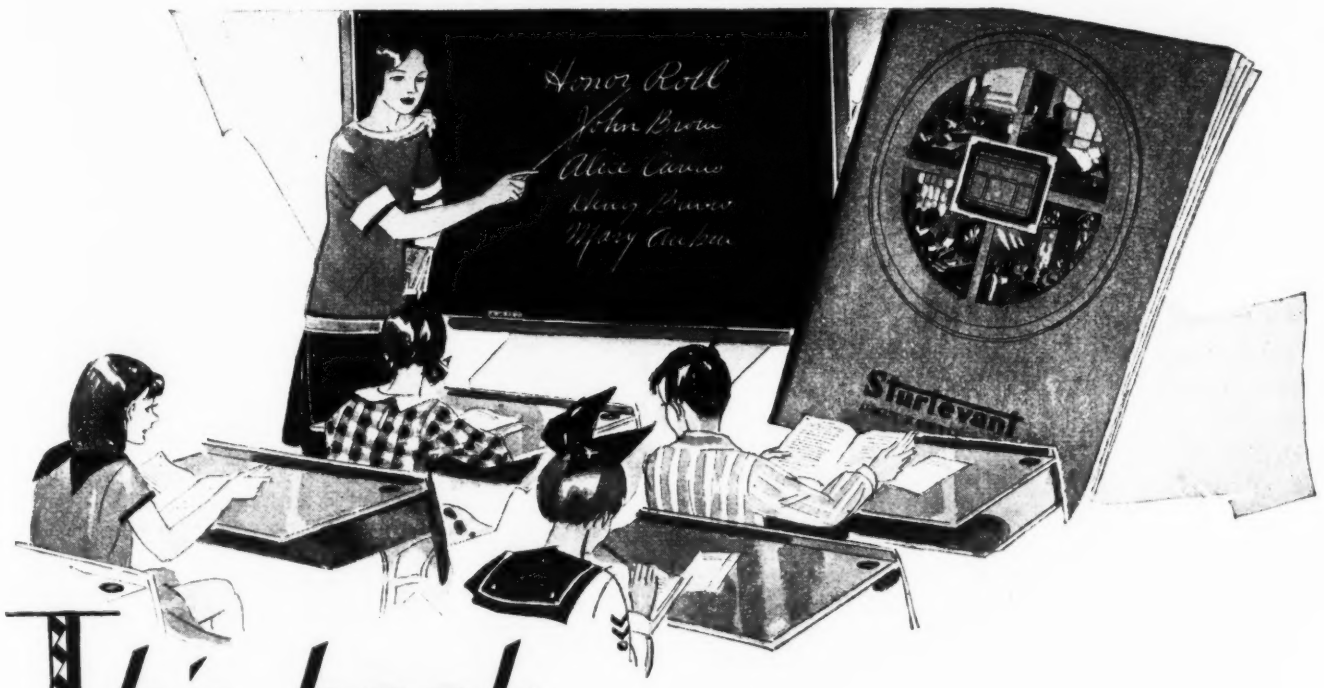
♦ Frank H. Beebe, superintendent of schools at New Haven, Conn., will retire in June, after completing 31 years of service.

♦ Supt. J. R. Grant, of Pocahontas, Iowa, has been reëlected for a second term.

♦ Mr. O. W. Beauchamp has been elected superintendent of schools at DeWitt, Iowa.

♦ James Simmons, of Newton, Mo., has been elected superintendent of schools at Novinger.

(Concluded on Page 148)



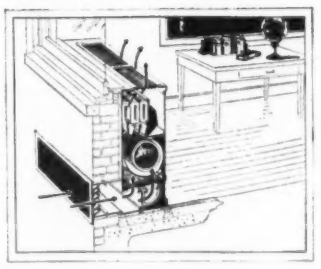
This book will help you raise the standard of scholarship in your school

DEAD, dusty, stuffy air doesn't help to keep the "young mind" on its work! Close concentration is out of the question in close classrooms.

But just fill the rooms with outdoor air... filtered clean and tempered by Sturtevant Unit Heater Ventilators. In the even, wholesome warmth, minds are keener . . . concentration closer . . . marks better.

Sturtevant Unit Heater Ventilators help concentration, too, because windows can be closed against noises from the street. Air is kept at precise temperature...without drafts...without troubling the teachers. Controlling mechanism is quite simple ...automatic or manual, as you like. Operation is QUIET!

Whether a school is old or new, Sturtevant Unit Heater Ventilators will fit in perfectly. School officials, architects and engineers are invited to write for this book . . . Catalog 377.



B. F. STURTEVANT COMPANY

Plants and Offices at: Berkeley, Cal. • Camden, N. J. • Framingham, Mass. Galt, Ontario • Hyde Park, Mass. • Sturtevant, Wis.

Branch Offices at: Atlanta; Boston; Buffalo; Camden; Charlotte; Chicago; Cincinnati; Cleveland; Dallas; Denver; Detroit; Hartford; Indianapolis; Kansas City; Los Angeles; Milwaukee; Minneapolis; Newark; New York; Omaha; Pittsburgh; Portland; Rochester; St. Louis; San Francisco; Seattle; Washington, D. C. *Canadian Offices at:* Toronto; Montreal; Galt. *Canadian Representative;* Kipp Kelly, Ltd., Winnipeg. *Agents in Principal Foreign Countries*

Sturtevant Unit Heater-Ventilator

Reg. U. S. Pat. Off.

SUPPLIES OUTDOOR AIR • FILTERED CLEAN • AND TEMPERED

(Concluded from Page 146)

♦ MR. ELMER RUSTAD, of Egan, S. Dak., has been elected superintendent of schools at Pipestone, Minn., to succeed O. E. Knudtson.

♦ ROY BELL, of Bloomfield, Iowa, has been elected superintendent of schools at Lucas.

♦ SUPT. R. L. BROWN, of Marshall, Minn., has been reëlected for another year.

♦ SUPT. W. A. FRANKS, of Euclid, Ohio, has been reëlected for a four-year term. Mr. Franks has completed eleven years of service in the schools.

♦ SUPT. T. W. NEVITT, of Clarkston, Wash., has been reëlected for a two-year term.

♦ SUPT. C. J. POLING, of Roundhead, Ohio, has been reëlected for a three-year term.

♦ SUPT. C. J. THOMSON, of Brown City, Mich., has been reëlected for his eleventh consecutive term.

♦ SUPT. H. L. SAMS, of Mt. Sterling, Ohio, has been reëlected for a new two-year term.

News of Officials

♦ The school board of Clenbard, Ill., has reorganized with the election of MR. E. C. HALL as president. MR. G. D. MILLER and MRS. HELENE R. MORGAN were reëlected as members of the board.

♦ JUDGE C. H. BASKIN has been elected a member of the school board at Wetumka, Okla. MR. BERT SHABER has been elected treasurer of the board.

♦ MR. MORRIS E. LEEDS has been appointed a member of the school board at Philadelphia, Pa. He is a graduate of Haverford College, and president of the board of directors of the College.

♦ DR. W. C. CARNES and MR. FRANK SUMMER have been reëlected as members of the board of education of Henryetta, Okla., for terms of four years each. MR. J. S. HOLCOMBE was elected as a member, to succeed Lee Boerstler, who had completed twelve years of service.

♦ Baraboo, Wis., has chosen its first elective board of education. The following were elected: NORMAN QUALE, W. D. STANLEY, MRS. CLARA T. RUNGE, A. R. DIPPEL, and E. P. MCFETRIDGE.

♦ SUPT. G. W. GOTKE, of Brownsville, Tex., has been reëlected for a three-year term. This is Mr. Gotke's third year as head of the school system.

♦ W. R. DAVIES, of Beaver Dam., Wis., was chosen superintendent of schools at Superior, Wis., from a list of more than 100 candidates. His salary will be $5,250 for the first year and $5,500 for the second of a two-year contract. He succeeds Miss Lulu L. Pickett, who in turn succeeded Paul R. Spencer, who was superintendent during the famous school strike last year when more than 1,000 pupils remained out of the schools for weeks.

♦ SUPT. G. E. DILLE, of Chillicothe, Mo., has been reëlected for a sixth consecutive term. Mr. Dille came to Chillicothe in 1925 from Cameron.

The school board, at the same time, reorganized, with the election of MR. C. T. BOTSFORD as president; DR. R. BARNEY as vice-president; MR. MARVIN ENGLAND as secretary; and MR. K. M. BLANCHARD as treasurer.

♦ SUPT. LEE EASTER, of Osceola, Iowa, has been reëlected for another year.

♦ SUPT. L. S. GRAVES, of Morton, Minn., has been reëlected for a seventh year.

♦ SUPT. L. B. SAYRE, of Goldfield, Iowa, has been reëlected for a third year.

♦ MR. H. G. GRIFFITH has been elected superintendent of schools at Blairstown, Iowa. Mr. Griffith was formerly principal of the high school.

♦ MR. JOHN LOGAN, of Eagle Grove, Iowa, has been elected superintendent of schools at Creston.

♦ SUPT. H. D. CROWELL, of Stamford, Conn., has been reëlected for another year.

♦ SUPT. T. V. EDDY, of St. Clair, Mich., has been reëlected for a second year.

♦ MR. G. E. BERSETTE, of Newaygo, Mich., has been elected superintendent of schools at Jonesville.

♦ MR. F. F. HALL, of Pequot, Minn., has been elected superintendent of schools at Mora.

♦ DR. J. C. DEWEY, formerly head of the schools of Galesville, Wis., has become head of the education department at Lindenwood College, St. Charles, Mo. Dr. Dewey will have charge of the education department, teaching elementary and secondary education, history of education, and vocational guidance. In addition, he will have charge of the training of teachers in the St. Charles schools.

♦ SUPT. W. S. SMITH, of Excelsior Springs, Mo., has been reëlected for another year.

♦ SUPT. EMIL ESTENSON, of Buhl, Minn., has been reëlected for a third consecutive term.

♦ SUPT. M. C. DARNALL, of Crawfordsville, Ind., has been reëlected for a two-year term, with a substantial increase in salary for each successive year.

♦ MR. A. F. WAGONER has been reëlected as president of the school board of Excelsior Springs, Mo. MR. JACOB MAURER was elected vice-president.

♦ MR. WILLIAM MCKENZIE has been reëlected as president of the school board at Springfield, Ill.

♦ SUPT. J. M. REED, of Fostoria, Ohio, has been reëlected for a period of three years.

♦ SUPT. H. C. PENDRY, of Ironton, Ohio, was recently elected president of the local Rotary club.

♦ SUPT. G. O. BARR, of Silvis, Ill., has been reëlected for a three-year term.

♦ MR. A. H. CHAMNESS has been elected superintendent of schools at Paris, Tenn.

♦ MR. L. E. SARK, of Mt. Sterling, Ill., has been elected superintendent of schools at White Hall, to succeed C. A. Whiteside.

♦ MR. H. S. ROBERSON, has been elected superintendent of schools at Metamora, Ohio.

♦ SUPT. A. G. ERICKSON, of Ypsilanti, Mich., has been reëlected for another year. He will receive $5,500 a year, starting July 1, instead of $6,000 voted him, because he had voluntarily asked for a reduction in pay. Mr. Erickson made the proposal with the understanding that the salary would be increased when conditions return to normal.

♦ SUPT. C. E. BECK, of Columbia City, Ind., has been reëlected for another year. Mr. Beck has completed three years as head of the school system.

♦ SUPT. LEON SMAAGE, of Hardy, Iowa, has been reëlected for another year.

♦ MR. H. G. GRIFFITH has been elected superintendent of schools at Van Horne, Iowa.

♦ SUPT. C. L. CRAWFORD, of Wagner, S. Dak., has been reëlected for another year.

♦ SUPT. E. E. SWANSON, of Humboldt, Iowa, has been reëlected for another year.

♦ MR. I. E. OTTEM, of Sarles, N. Dak., has been elected superintendent of schools at Langdon, to succeed N. L. Smith.

♦ SUPT. L. S. GRAVES, of Morton, Minn., has been reëlected for a seventh consecutive term.

♦ SUPT. W. T. NORTH, of Corydon, Iowa, has been reëlected for another year.

♦ SUPT. CLARENCE VLIET, of Birmingham, Mich., has been reëlected for another year.

♦ MR. ARTHUR PERRY has been elected superintendent of schools at Rahway, N. J., to succeed W. F. Little. Mr. Perry has been connected with the local schools for the past nineteen years.

♦ SUPT. VERNON PATTERSON, of Griswold, Iowa, has been reëlected for another year.

♦ SUPT. A. M. CALLON, of Lebanon, Ohio, has been reëlected for a three-year term. Mr. Callon has completed five years in the local schools.

♦ SUPT. F. E. CONVERSE, of Beloit, Wis., has been reëlected for his thirty-fifth consecutive term.

♦ SUPT. H. E. WRINKLE, of El Reno, Okla., has been reëlected for the coming year, with a substantial increase in salary.

RADIO EDUCATION

(Concluded from Page 64)

the Air during a week was 29.18 minutes. This, of course, does not take into consideration the time spent on other broadcast programs.

It appears that this is a very short time. However, school officials are faced with the problem of finding time for broadcasts. In order to prepare the listener and check results on each radio lesson, a considerable total amount of time must be available. To make this time available, especially in the elementary school, means crowding some subject into a smaller amount of time or removing it altogether. In order for one pupil to use much more than one or two broadcasts weekly it would appear necessary to let the radio lesson supplant, instead of supplement, at least one subject which now exists in the curriculum. This is contrary to our first objective which heralds the radio lesson as entirely supplementary. The only answer seems a reorganization and rearrangement of subject offerings, with the possibility of combining some subjects into one.

Of the people who used the radio lessons, it was found in Ohio that the average number of weeks during which they were in use since September, 1929, was 24.29 weeks. Eighty-two signified that they had used the programs throughout the year of 32 weeks.

5. The Teacher's Preliminary Preparation of the Class

The teacher's preliminary mechanical preparation of the class for the broadcast may take a varied number of forms. In the answer to the question, "What was the nature of the class preparation for the broadcast?" it was found that the responses from Ohio teachers might be grouped as follows:

1. Assignments, including some study by the pupil, such as study of outlines, questions, maps, texts, pictures, etc.	207
2. Oral discussion between teachers and pupils	105
3. Mere announcement of the broadcast to be used	22
4. Definite questions assigned, reports given	18
5. Used written material on board	14
6. Stories told, games played, dramatization; art books kept; other types of pupil activity	6
7. Trips to places of interest	1
Total	373

From this list of assignments used, it can readily be seen that approximately 66 per cent are of doubtful value. The first group of 207 responses is composed of answers too indefinite to lead us to believe that the assignments were concise and pointed. This sort of activity would be more or less haphazard, directionless, and futile. The second group — the discussion — signifies that the teacher did very little, if anything, of a definite nature in preparing the classes for the reception period. Discussion is the answer which tells us the least of what the teacher actually did. Oftentimes, this means, that, either the teacher did all of the preparation which should have been done by the pupils, or else it means that the teacher made a brief announcement of what was to occur, with no definite assignment being used. Twenty-two teachers frankly admitted that they did nothing more than to announce the broadcast.

The assignment covering the radio lesson must be, like other assignments, completely definite, fully explanatory, detailed, and anticipatory of difficulties likely to be encountered. It should provide for definite activity on the part of the pupils, prepare to arouse their curiosity and point toward the central thought of the broadcast.

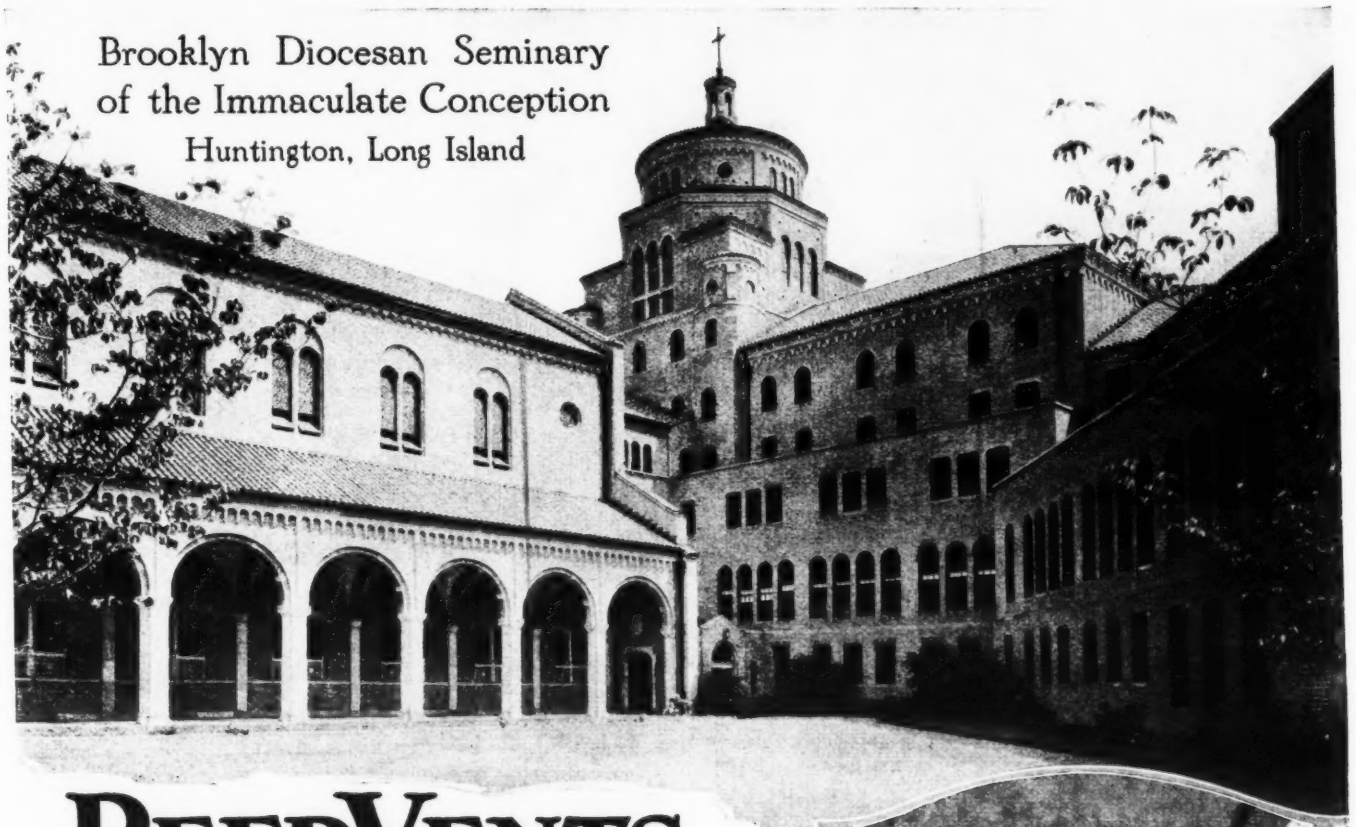
If no sheet is issued for distribution to the pupil, it may prove effective for the teacher to mimeograph or hectograph the assignment for distribution to each pupil. This will save class time and will make all directions definite. The blackboard may be used if neither of these methods are available, although this will consume a little more time. These assignment sheets should include a brief outline of the material to be covered in the broadcast, references where new material may be studied, and just what is expected in pupil accomplishment from the assignment. After they have served their purpose, they should be kept by each pupil, together with any written work done previous to the lesson.

Other Preparations

The teacher, in planning for the radio lesson, should spend much time deciding how best to utilize all the available visual material, such as pictures, models, drawings, lantern slides, charts, diagrams, exhibits, etc. Large benefits may be derived from turning the responsibility for some of this over to the pupils themselves. Indeed, oftentimes the pupils will supply a wealth of the type of material not easily obtained by the teachers. Weather, location, and finance, all will determine the type of supplementary material provided for the broadcast. Sometimes the teacher may be unable to provide the minimum of aids suggested in the outlines. At other times the wide-awake teacher will realize a wealth of material is available which could not have been listed in an outline.

The teacher must be ready to proceed immediately in case the broadcast should not be available due to the failure of the set, poor mechanical reception, poor listening conditions not possible of improvement, failure of the broadcasting teacher to arrive, or because of a change in the program. Should the material prove to be of a grade level above or below that of the class prepared to listen or not suitable for that class, the teacher is not justified in spending the time necessary to hear it. Only *when* the broadcast has been prepared for, and when it is just *what* has been prepared for, is a class justified in listening.

(Concluded on Page 152)



PEERVENTS

are chosen for economy and efficiency

RECORDS of efficiency, economy and durability, since the first PEERVENT was installed twenty years ago, have convinced architects that they are absolutely safe in specifying PEERVENTS for their finest buildings. For this reason PEERVENTS were chosen for the Brooklyn Diocesan Seminary in Huntington, Long Island.

Based on correct principles of heating and ventilating, PEERVENTS insure a more even temperature than ordinary types of heating systems. When properly installed with correctly located air inlets, PEERVENTS will keep the floor temperature within 2 degrees of the temperature of the breathing line. This temperature variation is often as much as 10 degrees with ordinary heating systems.

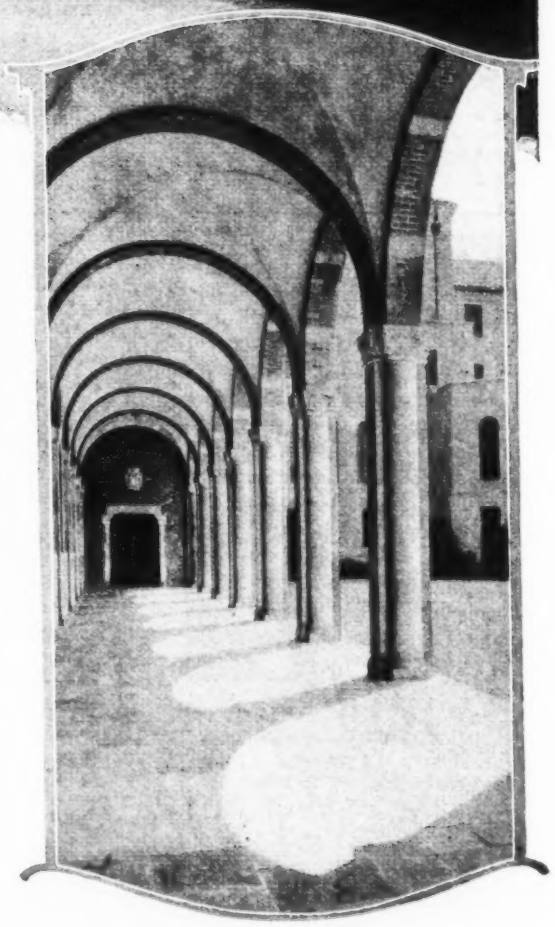
Please write if you wish to see our local resident engineer. You will be under no obligation. Also send for the Peerless Catalog.

PEERLESS UNIT VENTILATION CO., INC.

BRIDGEPORT, CONNECTICUT

Pioneers in Unit Ventilation

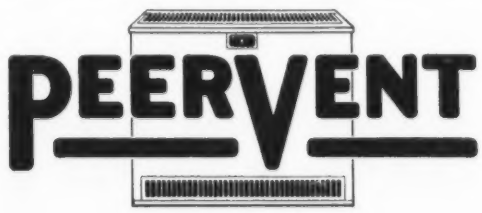
Resident Engineers in Principal Cities from Coast to Coast



Architect,
Robert J. Reiley, New York

Consulting Engineer,
Chauncey Matlock, New York

Heating Contractor,
Almirall & Company, Inc., New York



(Concluded from Page 150)

The teacher's largest task will be to create a sense of expectancy, of intense interest, and mental receptivity just before the radio lesson. This must be kept in mind on making the assignment so that any pleasurable anticipation may not be lessened because of too long or too difficult assignments. The peak of expectancy must be reached just before the lesson begins, so that perhaps three to five minutes are needed just previous to the broadcast to bring the pupils' interests to a climax. Here, again, perhaps we shall send up a fervent prayer for more teachers with that ability which fairly rustles with the electricity of vim, vitality, and dynamic force.

SCHOOL BOARD NEWS

♦ Indianapolis, Ind. It is charged by the *Indianapolis Times* that, following a custom of their predecessors, the citizens-committee school-board members have held "star chamber" sessions on all important school-administrative problems. Under the plan, a prior conference is held in the business director's office, behind closed doors, and another "star chamber" session follows the regular session. After the private meeting, the board members file into the board room, where typewritten copies of the reports are distributed, read, and approved. The regular sessions of the board have become an empty formality, conducted for benefit and entertainment of newspaper representatives and taxpayers who care to attend.

♦ Cincinnati, Ohio. The school board has adopted a rule that principals who have occasion to swear out warrants for the arrest of any person who destroys school property must first confer with the city attorney before causing such an arrest. The city attorney, in an opinion, has ruled that if the legal counsel advises such an arrest, the person swearing out the warrant can use this fact as a defense to any possible legal action for malicious prosecution. The board's action was taken because it was felt that the board could not pay the expense of defending a lawsuit growing out of the arrest of persons charged with an offense by a school principal.

♦ Covington, Ky. The school board has proposed an electric power plant of its own to supply current for the junior and senior high schools. The suggestion was made after a check of the local gas and electric bill revealed an increase of $300 a month for gas and electric bills during the winter, over that of previous years. The board members checked up on the records for several years back and it was decided to pay the bill for the February consumption under protest. During the year 1930 the board paid $9,123 for gas and electricity in all of the schools.

♦ Sebring, Ohio. By a unanimous vote of the board of education, the schools have been removed from the county system and placed under the direct supervision of the local superintendent of schools. Sebring had been in the county system for fifteen years, or since the system was adopted in Mahoning county.

♦ Madison, Wis. The city board of education is losing $900 a month through the delay in the payment of city real estate taxes, according to a report made to the board. It appears that the board has not received $300,000 of the tax money due it through the 1931 budget, and the city officials claim they are unable to pay it until the delinquent taxes come in on June 1.

♦ The Indiana tenure law requiring school officials to give teachers a life job after they have taught five years is operating against the teachers. School boards have in many instances refused to sign contracts with teachers where it means a life tenure. In Noblesville, applications were received from 75 to 100 teachers, a large majority of whom said they were not reëlected because of the tenure law.

♦ Girard, Ohio. Members of the school board have taken up with the city service director the matter of water rates charged to the board. It was pointed out that although the board buys more than 1,515,000 gallons of water each quarter, they are charged with the water as though they were six different consumers. Each school is required to pay high rates for the first amounts used, and receives the low rates only on the balance. The system used amounts to a difference of between $200 and $300 per month in the amount the schools pay. The school board contends that the schools should receive the water free of charge. A special committee has been appointed to study the matter and effect an adjustment of the problem.

♦ Tiffin, Ohio. The school board has taken action to prevent abuses in connection with the use of schoolhouses for athletic and social functions after school hours. It was ordered that some one person be made responsible for any school building used after school hours.

♦ Evansville, Ind. A request has been made to the school board to purchase Evansville-mined coal for the schools. It was pointed out that the miners and teamsters in Evansville depend on the mines in the vicinity for a living the year round. Purchase of Evansville coal would give twelve days' work to 500 miners and teamsters.

♦ Dearborn, Mich. The city council has called for plans and estimates of cost for a tunnel near the Lowery School to connect the school with the playground across the street. The school board has offered to pay half of the cost of the tunnel.

♦ Abington, Pa. A junior-and-grade-school building has been completed, at a cost of $300,000.

♦ In discussing the cost of education the *Detroit Free Press* recently said: "An idea of the generosity of the nation to its schools is graphically afforded by the statement of our own city budget director that more than 21.40 cents of Detroit's tax dollar is spent on education. We spend only a third of that amount for fire protection and two thirds of it for police service. The only budget item that absorbs more of the city's income than education is sinking fund and interest, which takes 26 cents of every dollar separated from the taxpayer. The nation as a whole spent on its public schools in 1927–28, exclusive of debt service, $2,151,171,687, which works out at about $17.50 for every man, woman and child in the country. Add to that the cost of private and parochial schools, as well as that of our institutions of higher learning, and you

(Concluded on Page 154)

(Concluded from Page 152)

have an aggregate investment in education of which any nation might be proud."

♦ Flint, Mich. The local teachers' association has offered to forego the customary salary increases this year in an effort to help the school board in solving the financial problem. Normally, every teacher would receive an annual salary increase for added experience, amounting to $50. These amounts would total $38,000. Other increases for additional training, amounting to $12,500 would not be dropped.

♦ Memphis, Tenn. The school board has adopted a budget of $3,161,491 for the school year 1931–32, which is practically the same as that of last year. Instruction, the largest item in the budget, calls for an expenditure of $2,246,316, as compared with $1,753,363 spent in 1930. Fixed expenses will require an expenditure of $525,000, and administration expenses $55,140.

♦ International Falls, Minn. At a meeting of the Koochiching county tax league, Supt. R. H. Larson announced the adoption of an economy program for the county schools. The new program calls for the closing of twenty schools, the transportation of students to consolidated schools, and a reduction in the salaries of teachers, janitors, and bus drivers, amounting to a saving of approximately $65,000. The total budget for the year amounts to $203,000.

♦ South Bend, Ind. The school board has proposed the adoption of a strict program of economy to meet a threatened reduction in the budget due to decreased property values and a limited school income.

♦ Fort Wayne, Ind. The school board has adopted a resolution, calling for a school year of nine months. Under the plan, teachers' contracts will be issued on a basis of nine months, from September 7 to May 13. No annual increments will be paid to teachers during the year. The change has been made to make possible a reduction of $120,000 in the school budget.

♦ Bellevue, Mich. The school board has ordered a decrease in teachers' salaries as a result of a strict economy program to be in effect during the school year.

♦ Detroit, Mich. Following a careful study of the 1931 budget, the city council has restored to the school board $134,000 it had cut from the public works, health, and general fund items. Of the budget total, the school board will receive $25,854,588, or $836,000 less than the amount allowed last year.

♦ Tacoma, Wash. At a recent meeting of the school board, a study of the 1931 tentative budget was made to devise a means of effecting a reduction of $100,000 in the estimated expenditures for the year. Directors J. W. Griffith and John H. Binns presented a plan calling for the elimination of six supervisors, with a saving of $18,505, and for a reduction of the salaries of principals and other school employees receiving more than $2,200 a year. The proposals of Messrs. Griffith and Binns would effect a saving of $101,110, leaving $3,606 more to cut.

♦ Amherst, Ohio. The school board has taken action to eliminate married women teachers, with the dropping of six teachers from the staff. The action is in line with a policy being adopted to give positions to unmarried women.

♦ Plymouth, Ind. The school board recently gave notice to the effect that no married women teachers will be employed next year. Under the rule, seven married women will not be retained during the next school year.

♦ "I do not want newspaper reporters present at the meetings when we are discussing policies," recently said Mrs. Clara Tagg Brewer, of the Cleveland board of education. "I don't think the public is interested in our meanderings before a decision is reached. The public is concerned in our conclusions, not our discussions."

♦ The supreme court of Iowa has rendered a decision, in which it reverses the lower court and upholds the validity of a clause in a teacher's contract, which gives either party the right to terminate the contract with a 20-day written notice.

♦ A proposed cut in teachers' salaries is vigorously opposed by the Tacoma, Wash., *Times*. It says: "Cutting salaries can only mean a critical reduction in efficiency. The pupils would suffer more than the teachers. If we are to maintain a competent teaching staff we must pay an adequate wage. Few there are who will suggest our teachers are now overpaid. During war time, their salaries were not raised, though nearly everybody else's pay went up. The net result of a wholesale pay slash would be to send our best instructors to other cities, which would be glad to avail themselves of their services. To force our most experienced teachers, those who have given much of their lives to the upbuilding of the local system, to other cities would be a black eye from which we would never recover."

♦ Racine, Wis. All married school teachers will be dismissed, and an age limit of 65 years enforced, under new rules of the school board. The action of the board means the dismissal of four women instructors who have served for more than 20 years. Two other married teachers are filling temporary positions.

The board has reduced the school budget by dropping the scheduled increases for instructors for a year. An exception is made in the cases of teachers only a few years in the system who are on the minimum wage scale.

♦ Fremont, Ohio. The school board has voted to suspend teachers' salary increases granted under the salary schedule for 1931–32. The suspension of these increases, which are given to teachers not already on the maximum schedule, will result in a saving of $4,900. The action of the board was attributed to the general industrial conditions and the possibility of reduced income through reduction of tax valuations.

DEPARTMENT OF SUPERINTENDENCE TO MEET AT WASHINGTON, D. C.

President Edwin C. Broome has announced that the sixty-second annual meeting of the Department of Superintendence will be held February 20–25, 1932, at Washington, D. C.

Information concerning the meeting, and hotel reservations may be obtained from Mr. S. D. Shankland, executive secretary, 1201 Sixteenth St., N.W., Washington, D. C.

Teacher Agencies

TEACHERS — The WATCHWORD of AMERICA is OPPORTUNITY
SEEK IT THROUGH THE
GREAT AMERICAN TEACHERS' AGENCY
Successor to
THE PENN EDUCATIONAL BUREAU
Established 1880 — 51st Year
205 North Seventh Street P. O. Box 157 Allentown, Penna.
Member National Association of Teachers' Agencies

THE EDUCATORS' EXCHANGE
DO YOU NEED PROGRESSIVE TEACHERS
who have the capacity and the will to promote the interests of your school? :: :: Communicate at once when you have vacancies.
ALLIED PROFESSIONAL BUREAUS
Marshall Field Annex CHICAGO, ILL.

ITHACA TEACHERS AGENCY
PERSONAL SERVICE
Free to School Officials
130 BLAIR STREET ITHACA, NEW YORK

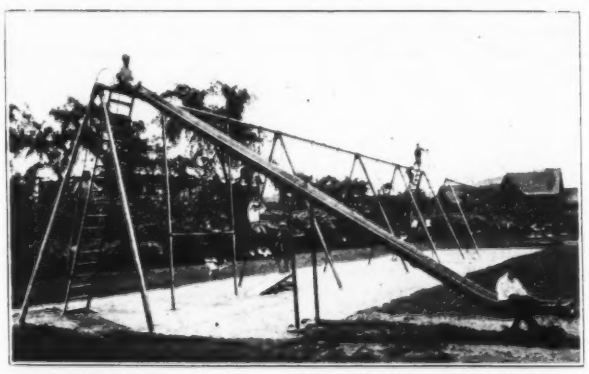
ALBERT
Established 1885
Teachers' Agency
25 East Jackson Blvd., Chicago
535 Fifth Avenue, New York
Peyton Bldg., Spokane, Washington
York Rite Temple, Wichita, Kansas
Still under same active management. Best Schools and Colleges permanent clients. Best qualified men and women on our available list. Prompt service.

COLLEGE GRADUATES AND TEACHERS OF SPECIAL SUBJECTS recommended exclusively. Report your vacancies now. 30th year. Leading bureau for teachers of commercial, industrial, and physical education.
SPECIALISTS' EDUCATIONAL BUREAU
320 N. Grand Blvd.
ST. LOUIS, MO.
Member National Association of Teachers Agencies.

FISK TEACHERS' AGENCY
1020 McGEE ST.
KANSAS CITY. MO.
Associated with
E. O. Fisk Agencies
J. A. DEVLIN, MANAGER

ALBANY TEACHERS' AGENCY, INC.
74 Chapel Street, Albany, N. Y. Established 1885
Provides Schools and Colleges with Competent Teachers
Assists Teachers in Securing Positions
WILLARD W. ANDREWS, *President* F. WAYLAND BAILEY, *Secretary*
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

"CHICAGO"



"CHICAGO"

"CHICAGO" Playground Apparatus and Equipment is of latest design with all metal parts fully weatherproofed. It has been thoughtfully designed and painstakingly built with special attention to bearings and other wearing parts. "CHICAGO" Equipment has an *extra* strength that makes it safer, that enables it to stand up under all manner of abuse and give long, satisfying service. Write for Catalog No. 4.

CHICAGO GYMNASIUM EQUIPMENT CO.
1835 West Lake Street CHICAGO, U. S. A.

FISK TEACHERS AGENCY CHICAGO
C. E. Goodell, A.M., LL.D., Colgate University, President and Gen. Mgr.
We make contact with the best teaching talent—and find the best teaching positions. In every department—from primary through college—experienced placement authorities are at your command. All have intimate knowledge of both employers' and teachers' needs. They will give you a new conception of intelligent placement service. Write now for Registration Blank.
Address 857 Steger Bldg., Chicago, Ill.

INTERSTATE TEACHERS' AGENCY
T. H. Armstrong, Mgr.
533 Genesee Valley Trust Building Rochester, New York
Twenty-five years experience. Write for information.
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

THE ROCKY MT. TEACHERS' AGENCY
Wm. Ruffer, Ph.D., *Manager*
Branch Office
Lumber Exchange Bldg. Minneapolis, Minn.
410 U. S. National Bank Bldg., Denver, Colo.
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

SABINS' EDUCATIONAL EXCHANGE
Estab. 1893
412 Shops Bldg., Des Moines, Iowa
Earl T. Housh, Manager Prompt, Efficient and Reliable Service
Branch Office—1708 Farnam St., Omaha, Nebraska.
Member National Association of Teachers' Agencies.

Schermerhorn Teachers' Agency *Established 1855*
CHARLES W. MULFORD, Prop.
366 Fifth Ave., between 34th and 35th Sts., NEW YORK
A Superior Agency for Superior People.
Branch Offices:
1086 Union Trust Bldg., Pittsburgh, Pa.
1836 Euclid Ave., Cleveland, Ohio.
We Register Only Reliable Candidates.
Services Free to School Officials.
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

SOUTHERN TEACHERS' AGENCY
Columbia Chattanooga Richmond
Louisville Memphis
Continuous registration in four offices
NO ADVANCE FEES
Covers Middle Atlantic, South and Middle West
MEMBER NATIONAL ASSOCIATION OF TEACHER AGENCIES

TEACHERS WANTED
For Schools and Colleges—
Every day of the year
D. H. Cook, Gen. Mgr.
NATIONAL TEACHERS AGENCY, INC.
Home Office—Philadelphia, Pa.
BRANCH OFFICES
Pittsburgh, Pa., Syracuse, N. Y., Northampton, Mass., New Haven, Conn., Cincinnati, O., Bowling Green, Ky., Jacksonville, Fla., Washington, D. C.
Positions waiting—correspondence confidential.

COMPLETE STAGE EQUIPMENT

SEND FOR CATALOGUE

TIFFIN Scenic Studios
TIFFIN, OHIO

School Buyers Shopping Guide

All kindZ

SCHOOL SIGNS

Door, Road, Wall, Desk, Bus, Name-Plates, Teachers' and Changeable signs. Numbers, Letters, Holders, school marking specialties. Any kind of Engraved Brass, Cast Bronze, Inlaid Bronze or Built-up Strip, Plate, Plaque, Tablet, Class Roll, Trophy, etc. Directories, Exit signs, and so on .

"we supply—
any sign a school will specify."

Please outline your idea or describe need for suggestions, quotations, literature and name of nearest supply house.

HULL SIGN CO., W. Winfield, N. Y.

SAVE 14 to 67%
on Maintenance Painting

WITH COMPLETE UNITS $36.50 and up

Paasche PORTABLE AIRPAINTING UNITS

Write today for free booklet
PAASCHE AIRBRUSH CO.
1929 Diversey Pkwy., Chicago

"CHO-SECO" INK PELLETS
(Made in America)

THIS ink never corrodes, gums nor molds. Now used in more than forty States.

(Money back guarantee)

Mention this magazine for free sample.
A good surprise awaits you.

Cho-Seco Ink Pellet Co., Albany, N. Y.

The Original Portable
REVOLVING
DICTIONARY STAND
In use in the principal schools, colleges, public libraries, etc.
STANDS ON ANY TABLE-TOP
Saves wear and tear on the big dictionaries
Full particulars from
THE H. R. HUNTTING CO. Springfield, Mass.

THE CURIOUS CAR - Craig
New supplementary reading material for the primary grades. Price, 88 cents.
The Bruce Publishing Co., Milwaukee

CLASSIFIED

POSITIONS OPEN

Aznoe's Available School Nurses: (A) R.N. Missouri, Kansas and Oklahoma, aged 30, seeks appointment as high school or college nurse; over six years' excellent experience; asks $2250 per year. (B) R.N. Texas and Missouri, aged 31, over ten years' varied institutional, public health and school nursing experience, desires position in or near St. Louis at $140 month. **No. 3793 Aznoe's Central Registry, 30 North Michigan, Chicago.**

School Superintendents—Attention! Here's a chance to make some extra money this summer, by representing a leading manufacturer of a real school necessity. Address, **Dept. 43J, American School Board Journal.**

"OBCO" STEEL FLAG POLES

They are storm and lightning proof, smooth and straight, last a lifetime, cost less than wood poles.

Our flag poles are constructed of steel pipe sections, telescoping into each other and held in place with steel pins, thereby making a tight and rigid joint.

Erection is very simple, and with the full directions furnished by us anyone can do it.

WRITE FOR CIRCULAR AND PRICES.

OTTO BIEFELD COMPANY
118 - 206 N. Water St. Watertown, Wisconsin

STAGE SCENERY

One Curtain or
A Complete Stage Equipment

Tell us your Stage Scenery Problems and let us solve them for you.

UNIVERSAL SCENIC STUDIO, INC.
1218-24 No. Fifth St.
MILWAUKEE, WISCONSIN

STAGE EQUIPMENT

Since 1869

Volland Scenic Studios, Inc.
3729-37 Cass Avenue St. Louis, Mo.

SILICATE BLACK BOARDS

Made of the best material thoroughly seasoned—Framed or Unframed—All Frames are Oak Finished. U. S. Government Contracts and New York City Board of Education Specifications for 40 Years.

CORK BULLETIN BOARDS
Framed or Unframed Sizes 18 x 24 inches
Frames are Oak Finished to 4 x 6 feet.

Dealers write for catalogue.

N. Y. SILICATE BOOK SLATE COMPANY
20 VESEY STREET NEW YORK CITY

IMPROVED AUTOMATIC "SUPER SPECIAL"

Cut about ⅓ actual size

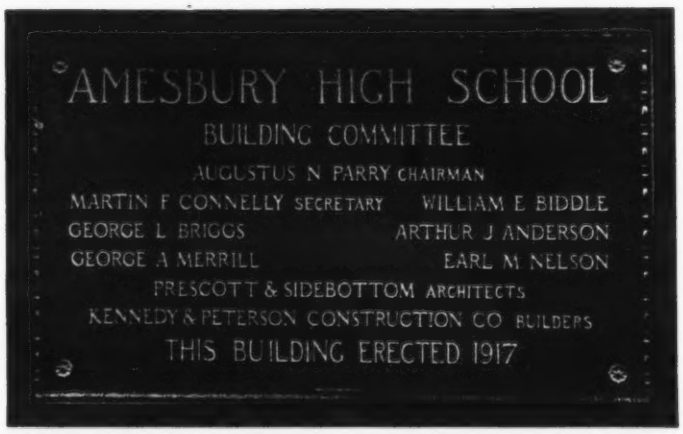
The most economical and popular time-tried self-locking keyless padlock available for school lockers. It is rugged, durable, efficient and foolproof. (The combination is completely thrown off when shackle is closed.)

Simplest in construction and most convenient in operation of automatic padlocks. Attractive cadmium finish. Guaranteed and backed by more than thirty years of specialized experience and service.

The locks are made special for installations with individualized serial numbering. Permanent supplementary record of serials and combinations is furnished.

Sample and special proposition to operating school officials on request.

THE J. B. MILLER KEYLESS LOCK COMPANY
KENT, OHIO - - - - - U. S. A.



HONOR ROLLS—MEMORIAL TABLETS—IN BRONZE
MODELED, CAST AND FINISHED BY
ALBERT RUSSELL AND SONS CO.
125 MERRIMACK ST. NEWBURYPORT, MASS.

Directory of Equipment and Supplies

ACID- AND CORROSION-PROOF CHEMICAL STONEWARE
Knight, Maurice A.

ACOUSTICAL TREATMENT
Armstrong Cork & Insulation Co.
Celotex Company, The
Housing Company, The
Johns-Manville Corp.

ADJUSTABLE WINDOW SHADES
Athey Company, The
Draper Shade Co., L. O.
Maxwell & Co., Inc., S. A.

AIR CONDITIONING
American Air Filter Company, Inc.
American Blower Company
Buckeye Blower Company
Nelson Corporation, The Herman
Peerless Unit Ventilation Co., Inc.
Sturtevant Co., B. F.

AIR FILTERS
American Air Filter Co., Inc.

AIR WASHERS
American Blower Company
Sturtevant Company, B. F.

ARCHITECTS
(See Schoolhouse Architects' Directory)

ASH HOISTS
Gillis & Geoghegan

AUDITORIUM DRAPERIES
Volland Scenic Studios

AUDITORIUM SEATING
American Seating Company
Deskor Chair Sales Corp.
Heywood-Wakefield Co.
Kundtz Co., The Theodor
Mahoney Chair Company, The
National School Equipment Co.
Peabody Seating Co.
Standard Mfg. Company
Steel Furniture Co.
Welch Company, W. M.

AUTOMATIC TELEPHONE SYSTEMS
Automatic Electric, Inc.
Graybar Electric Co , Inc.

BIOLOGICAL SUPPLIES
Welch Mfg. Company, W. M.

BLACKBOARD CLEANERS
Beckley-Cardy Company
Huntington Laboratories
Oakite Products, Inc.
Vestal Chemical Company
Weber Costello Company

BLACKBOARDS—MANUFACTURED
Beckley-Cardy Company
K-M Supply Company
N. Y. Silicate Book Slate Co.
Prose Maco Mfg. Company
Standard Blackboard Company
Valleyco Company, The
Weber Costello Company

BLACKBOARDS—SLATE
Natural Slate Blackboard Co.
N. Y. Silicate Book Slate Co.

BLEACHERS
Circle A Products Corp.
Universal Equipment Co.
Wayne Iron Works

BOILERS
Heggie Simplex Boiler Company
Kewanee Boiler Company
Spencer Heater Company

BOILER COMPOUNDS
Hillyard Chemical Company
Huntington Laboratories
Vestal Chemical Company

BOOK BINDERS' EQUIPMENT AND SUPPLIES
Binders Board Mfrs. Association
Oversewing Machine Co.

BOOK CASES
Kewaunee Mfg. Company
Peterson & Company, Leonard
Remington-Rand Business Service, Inc.
Welch Manufacturing Company, W. M.

BOOK COVERS
Binders Board Mfrs. Association
du Pont de Nemours & Co., E. I.
Holden Patent Book Cover Co.
Iroquois Publishing Co.

BOOKKEEPING MACHINES
Remington-Rand Business Service, Inc.

BOOK PUBLISHERS
American Book Company
Beckley-Cardy Company
Bruce Publishing Co.
Ginn & Company
Gregg Publishing Company
Houghton Mifflin Co.
Iroquois Publishing Co.
Laidlaw Brothers
Macmillan Company, The
Merriam Co., G. & C.
Winston Co., The John C.

BOX LOCKERS (STEEL)
Durabilt Steel Locker Co.

BRONZE TABLETS, SIGNS, LETTERS
Russell & Sons Co., Albert

BRUSHES
Hillyard Chemical Company
Huntington Laboratories
Vestal Chemical Company

BUILDING MATERIALS
Asbestos Buildings Company
Barrett Company, The
Celotex Company, The
Detroit Steel Products Co.
Housing Company, The
Johns-Manville Corp.
Northwestern Steel Products Co.
Sonneborn Sons, L.
Truscon Steel Company

BULLETIN BOARDS
Beckley-Cardy Company
Kewaunee Mfg. Company
N. Y. Silicate Book Slate Co.
Sheldon & Company, E. H.
Standard Blackboard Co.
Weber Costello Company
Welch Mfg. Co., W. M.

BUSES
Dodge Brothers Corporation
York-Hoover Body Corp.

BUS BODIES
Superior Body Company

CABINETS—STORAGE—STEEL
Angle Steel Stool Company
Berger Mfg. Co.
Durabilt Steel Locker Co.
Lyon Metal Products, Inc.
Northwestern Steel Products Co.

CABINETS—WARDROBE—STEEL
Durabilt Steel Locker Co.

CAFETERIA EQUIPMENT
Angle Steel Stool Company
Blickman, Inc., S.
Dougherty & Sons, Inc., W. F.
Kewaunee Mfg. Company
Sheldon & Company, E. H.
Standard Gas Equipment Corp.
Van Range Co., The John
Welch Mfg. Co., W. M.

CANVAS GOODS
Tucker Duck & Rubber Co.

CHAIRS
Algoma Wood Products Co.
American Seating Company
Angle Steel Stool Company
Beckley-Cardy Company
Clarin Manufacturing Co.
Derby Company, P.
Fort Massac Chair Co., The
Kenney Bros. and Wolkins
Mahoney Chair Company, The
Maple City Stamping Company
Northern Corrugating Co.
Peabody Seating Co.
Royal Metal Mfg. Co.
Standard Manufacturing Co., The
Standard School Equipment Co.
Standard School Fixtures Co.
Thonet Brothers, Inc.
Tucker Duck & Rubber Co.
Wark-Beacon Steel Furniture Co.
Welch Mfg. Co., W. M.

CHALKS
American Crayon Company
Beckley-Cardy Company
Binney & Smith Co.
National Crayon Company
Weber Costello Company
Welch Mfg. Co., W. M.

CHARTS
Weber Costello Co.

CHEMISTRY SUPPLIES
Welch Mfg. Co., W. M.

CLASSROOM FILMS
Eastman Teaching Films, Inc.

CLEANING COMPOUNDS
Continental Chemical Corporation
Hillyard Chemical Co.
Huntington Laboratories
Oakite Products, Inc.
Vestal Chemical Co.

CLOCKS—PROGRAM
International Business Machines Corp.
Murphy-Davis Signal Co.
Standard Electric Time Co.

CLOTH BLACKBOARDS
Beckley-Cardy Company
N. Y. Silicate Book Slate Co.
Weber Costello Company

COMBINATION LOCKS
Corbin Cabinet Lock Company
Dudley Lock Corporation, The
Kewaunee Mfg. Company
Miller Keyless Lock Co., J. B.
National Lock Co., The

CORK TILE AND CORK CARPET
Armstrong Cork & Insulation Co.
Congoleum-Nairn, Inc.

CRAYONS
American Crayon Company
Beckley-Cardy Company
Binney & Smith Co.
National Crayon Co.
Weber Costello Company
Welch Mfg. Co., W. M.

CRAYON COMPASSES
N. Y. Silicate Book Slate Co.
Weber Costello Company

CRAYON TROUGHS
Dudfield Manufacturing Company
Weber Costello Company

DAMPPROOFING
Sonneborn Sons, L.
Truscon Steel Company
Vortex Mfg. Co.

DEADENING QUILT
Celotex Company, The

DESKS—OFFICE
Angle Steel Stool Company
Beckley-Cardy Company
Imperial Desk Company
Welch Mfg. Co., W. M.

DIPLOMAS
Beckley-Cardy Company
Welch Mfg. Co., W. M.

DISHWASHING COMPOUNDS
Hillyard Chemical Company
Huntington Laboratories
Oakite Products, Inc.
Vestal Chemical Company

DISINFECTANTS
Continental Chemical Corporation
Hillyard Chemical Co.
Huntington Laboratories
Vestal Chemical Company

DOMESTIC SCIENCE EQUIPMENT
Christiansen, C.
Dougherty & Sons, Inc., W. F.
Kewaunee Mfg. Co.
Kimball Company, W. W.
Peterson & Co., Leonard
Sheldon & Company, E. H.
Van Range Co., The John
Welch Mfg. Co., W. M.

DOORS
Richards-Wilcox Mfg. Co.

DOORS—STEEL-FIREPROOF
Detroit Steel Products Co.
Truscon Steel Company

DRAFTING DEPT. FURNITURE
Angle Steel Stool Company
Christiansen, C.
Kewaunee Mfg. Company
Sheldon & Company, E. H.
Welch Mfg. Co., W. M.

DRIERS—HAND AND FACE
Chicago Hardware Foundry Co.

DRINKING FOUNTAINS
Clow & Sons, James B.
Crane Co.
Rundle-Spence Mfg. Company
Taylor Company, Halsey W.

DUPLICATORS
Dick Co., A. B.
Standard Mailing Machines Co.

ELECTRICAL EQUIPMENT
Westinghouse Electric & Mfg. Co.

ELECTRICAL REFRIGERATION
General Electric Company

ELECTRIC DRIERS
Chicago Hardware Foundry Co.

ELECTRIC HAND SAWS
Skilsaw, Inc.

ENGRAVERS
Premier Engraving Company

ERASERS
Beckley-Cardy Company
Weber Costello Co.

ERASER CLEANERS
Weber Costello Company

FENCES
American Wire Fence Company
Anchor Post Fence Company
Continental Steel Corporation
Cyclone Fence Co.
Page Fence Association
Stewart Iron Works Co., The
Wayne Iron Works
Wickwire Spencer Steel Company

FILING SYSTEMS
Remington-Rand Business Service, Inc.

FIRE ALARM SYSTEMS
International Business Machines Corp.
Standard Electric Time Company

FIRE ESCAPES
Butler Mfg. Co.
Potter Manufacturing Corp.

FIRE EXIT LATCHES
Potter Manufacturing Corp.
Steffens-Amberg Company
Vonnegut Hardware Co.

FIRE INSURANCE
Home Insurance Company, The

FIREPROOF DOORS
Detroit Steel Products Co.
Truscon Steel Company

FIREPROOFING MATERIALS
Asbestos Buildings Company

FLAG POLES
Biefeld & Company, Otto

FLOOD LIGHTS
Giant Mfg. Co.
Hill-Standard Company

FLOOR COVERING
Armstrong Cork & Insulation Co.
Congoleum-Nairn, Inc.
Heywood-Wakefield Co.
Sloane Co., W. & J.

FLOOR FINISHES
American Crayon Company
Churchill Manufacturing Co.
Continental Chemical Corporation
Finnell System, Inc.
Hild Floor Machine Co.
Hillyard Chemical Company
Huntington Laboratories
Johnson & Son, S. C.
Sonneborn Sons, Inc., L.
Vestal Chemical Co.

FLOOR SCRUBBING EQUIPMENT
Finnell System, Inc.
Hillyard Chemical Company
Hild Floor Machine Co.
Huntington Laboratories
Lincoln-Schlueter Floor Machinery Co.
Vestal Chemical Company

FLOORS, STEEL FIREPROOF
Truscon Steel Company

FLOOR TILES
Congoleum-Nairn, Inc.
Norton Company

FLOOR TREATMENTS & COMPOUNDS
Churchill Manufacturing Co.
Continental Chemical Corporation
Finnell System, Inc.
Hillyard Chemical Co.
Huntington Laboratories
Johnson & Son, S. C.
Sonneborn Sons, L.
Vestal Chemical Co.

FLOOR WAX
Finnell System, Inc.
Hillyard Chemical Company
Huntington Laboratories
Johnson & Son, S. C.
Vestal Chemical Company

FLOORING
Carter Bloxonend Flooring Co.
Congoleum-Nairn, Inc.
Southern Oak Flooring Industries
Truscon Steel Company

FLOORING—COMPOSITION
Congoleum-Nairn, Inc.

FLUSH VALVES
Clow & Sons, James B.
Crane Co.
Sloan Valve Company

FOLDING CHAIRS
Angle Steel Stool Company
Clarin Mfg. Company
Derby Company, P.
Mahoney Chair Company, The
Maple City Stamping Company
Northern Corrugating Co.
Peabody Seating Co.
Royal Metal Mfg. Co.
Standard Mfg. Company
Tucker Duck & Rubber Co.
Welch Mfg. Co., W. M.

FOLDING PARTITIONS
Circle A Products Corp.
Horn Folding Partition Co.
Park, Winton & True Co.
Fort Massac Chair Co., The
Richards-Wilcox Mfg. Co.
Wilson Corp., Jas. G.

FURNITURE
Algoma Wood Products Co.
American Seating Co.
Angle Steel Stool Company
Beckley-Cardy Company
Columbia School Supply Company
Deskor Chair Sales Corp.
Heywood-Wakefield Co.
Imperial Desk Company
Kenney Bros. and Wolkins
Kewaunee Mfg. Company
Kimball Company, W. W.
Kundtz Co., The Theo.
Maple City Stamping Company
Mutschler Bros. Company
National School Equipment Co.
Peabody Seating Co.
Remington-Rand Business Service, Inc.
Royal Metal Mfg. Co.
Sheldon & Company, E. H.
Standard School Equipment Co.
Standard School Fixtures Co.
Steel Furniture Co.
Wark-Beacon Steel Furniture Co.
Welch Mfg. Co., W. M.

GAS MACHINES
Matthews Gas Machine Co.

GLASS
Libbey-Owens-Ford Glass Co.
Manufacturers Glass Company

GLOBES
Beckley-Cardy Company
Weber Costello Company

GRANDSTANDS
Circle A Products Corp.
Universal Equipment Co.
Wayne Iron Works

GYMNASIUM APPARATUS
Chicago Gymnasium Equipment Co.
Narragansett Machine Company

GYMNASIUM FLOORING
Carter Bloxonend Flooring Co.
Southern Oak Flooring Industries

GYMNASIUM LOCKERS—STEEL
Berger Mfg. Company
Durabilt Steel Locker Co.
Lyon Metal Products, Inc.
Narragansett Machine Co.
Northwestern Steel Products Co.

HAIR DRIER
Chicago Hardware Foundry Co.
(Sani-Dri Division)

HEATING SYSTEMS
American Blower Company
Buckeye Blower Co.
Clow & Sons, Jas. B. ("Gasteam")
Crane Company
Heggie Simplex Boiler Company
Nelson Corp., The Herman
Peerless Unit Ventilation Co., Inc.
Sturtevant Co., B. F.

HUMIDITY CONTROL
Johnson Service Co.

INKS
American Crayon Company
Sanford Mfg. Co.

INKWELLS
Sengbusch Self-Closing Inkstand Co.
Squires Inkwell Company
Tannewitz Works, The
U. S. Inkwell Company

INSULATION
Armstrong Cork & Insulation Co.
Celotex Company, The
Housing Company, The
Johns-Manville Corp.

JANITORS' SUPPLIES
Continental Chemical Corporation
Dougherty & Sons, Inc., W. F.
Finnell System, Inc.
Hild Floor Machine Co.
Hillyard Chemical Company
Huntington Laboratories
Oakite Products, Inc.
Sonneborn Sons, L.
Vestal Chemical Company
Welch Mfg. Co., W. M.

KEY CONTROL SYSTEMS
Thayer Tel-Kee Corporation

KEYLESS LOCKS
Corbin Cabinet Lock Company
Dudley Lock Corporation
Kewaunee Mfg. Company
Miller Keyless Lock Co., J. B.
National Lock Co., The

KITCHEN EQUIPMENT
Blickman, Inc., S.
Dougherty & Sons, Inc., W. F.
Standard Gas Equipment Corp.
Van Range Co., The John
Westinghouse Electric & Mfg. Co.

LABORATORY APPARATUS
International Business Machines Corp.
Leitz, Inc., E.
Standard Electric Time Company
Welch Mfg. Co., W. M.

LABORATORY FURNITURE
Alberene Stone Company
Angle Steel Stool Company
Columbia School Supply Company
Kewaunee Mfg. Company
Kimball Company, W. W.
Peterson & Co., Leonard
Sheldon & Company, E. H.
Welch Mfg. Co., W. M.

LADDERS
Dayton Safety Ladder Co., The

LANTERN SLIDES
Keystone View Company
Welch Mfg. Co., W. M.

LAWN MOWERS
Ideal Power Lawn Mower Co.

LIBRARY FURNITURE
Demco Library Supplies
Kewaunee Mfg. Company
Kimball Company, W. W.
Peterson & Company, Leonard
Remington-Rand Business Service, Inc.
Sheldon & Company, E. H.
Welch Mfg. Co., W. M.

LIBRARY SUPPLIES
Demco Library Supplies

LIGHTING EQUIPMENT
Gleason-Tiebout Glass Co.
Graybar Electric Co., Inc.
Holophane Company, Inc.
Westinghouse Electric & Mfg. Co.

LINOLEUMS
Congoleum-Nairn, Inc.
Sloane Co., W. & J.

LIQUID FLOOR HARDENER
Sonneborn Sons, L.

LIQUID SOAPS
Continental Chemical Corporation
Hillyard Chemical Company
Huntington Laboratories
Vestal Chemical Co.

LOCKERS—STEEL
Berger Manufacturing Comapny
Durabilt Steel Locker Co.
Lyon Metal Products, Inc
Narragansett Machine Company
Northwestern Steel Products Co.

LOCKS—KEYLESS
Corbin Cabinet Lock Company
Dudley Lock Corporation, The
Kewaunee Mfg. Company
Miller Keyless Lock Co., J. B.
National Lock Co., The

MAPS
Beckley-Cardy Company
Weber Costello Company
Welch Mfg. Co., W. M.

MEMORIAL TABLETS
Russell & Sons Co., Albert

METAL BLACKBOARD TRIM
Dudfield Manufacturing Company
Truscon Steel Company

(Continued on Page 162)

Directory of Equipment and Supplies

(Continued from Page 160)

METAL LATH
Berger Manufacturing Company
Northwestern Steel Products Co.
Truscon Steel Company

MICROSCOPES
Bausch & Lomb Optical Co.
Leitz, Inc., E.
Spencer Lens Company
Welch Mfg. Co., W. M.

MIMEOGRAPHS
Dick Co., A. B.

MODELING CLAY
American Crayon Company

MOTION PICTURE MACHINES
Eastman Teaching Films, Inc.

PAINTS
Sonneborn Sons, L.
U. S. Gutta Percha Paint Co.

PAINTS—TECHNICAL
Sonneborn Sons, Inc., L.
Truscon Steel Company

PAINT SPRAYING EQUIPMENT
DeVilbiss Mfg. Co., The

PANIC EXIT DEVICES
Potter Manufacturing Corp.
Steffens-Amberg Company
Vonnegut Hardware Company

PAPER
American Crayon Company
Beckley-Cardy Company
Kalamazoo Vegetable Parchment Co

PASTE
Sanford Mfg. Co.

PENCILS
American Crayon Company

PENCIL SHARPENERS
Automatic Pencil Sharpener Co.

PHYSICS EQUIPMENT
Welch Mfg. Co., W. M.

PIANOS
Kimball Company, W. W.

PLAYGROUND APPARATUS
Chicago Gymnasium Equipment Co.
Everwear Mfg. Co.
Hill-Standard Company
Narragansett Machine Company

PLAYGROUND ENCLOSURES
American Wire Fence Company
Anchor Post Fence Company
Continental Steel Corporation
Cyclone Fence Co.
Page Fence Association
Stewart Iron Works Co., The
Wickwire Spencer Steel Company

PLAYGROUND LIGHTING EQUIP.
Giant Manufacturing Company
Hill-Standard Company

PLUMBING FIXTURES
Clow & Sons, James B.
Crane Company
Hoffmann & Billings Mfg. Co.
Rundle-Spence Mfg. Company
Sloan Valve Company
Speakman Company
Taylor Company, Halsey W.
Vogel Company, Joseph A.

POINTERS
N. Y. Silicate Book Slate Co.
Weber Costello Company

POLISHING AND WAXING EQUIP.
Finnell System, Inc.
Hillyard Chemical Company
Hild Floor Machine Co.
Huntington Laboratories
Johnson & Son, S. C.
Lincoln-Schlueter Floor Machinery Co.
Vestal Chemical Company

PORTABLE BLEACHERS
Circle A Products Corp.
Wayne Iron Works

PORTABLE SANDING MACHINES
Clarke Company, A. A.
Skilsaw, Inc.

PORTABLE SCHOOLHOUSES
American Builders, Inc.
Asbestos Buildings Co.
Circle A Products Corporation
Harris Brothers Company

PROJECTION LANTERNS
Bausch & Lomb Optical Co.
Spencer Lens Co.

PROJECTION MACHINES
Eastman Teaching Films, Inc.
RCA Photophone, Inc.

PUBLIC ADDRESS SYSTEMS
Graybar Electric Co., Inc.
International Business Machines Corp.
Multi-Selecto Phonograph, Inc.
Western Electric Co.

PUMPS—Vacuum, Condensation, Centrifugal, Sump
Nash Engineering Co.

RACKS, GYM. BASKET (STEEL)
Durabilt Steel Locker Co.

RADIOS
Multi-Selecto Phonograph, Inc.

RANGES
Standard Gas Equipment Corp.
Van Range Co., The John
Westinghouse Electric & Mfg. Co.

RECORD SYSTEMS
Remington-Rand Business Service, Inc.

REFRIGERATION
General Electric Company

RE-INFORCED STEEL
Berger Mfg. Company
Truscon Steel Co.

REPRODUCTION SYSTEMS
Multi-Selecto Phonograph, Inc.
Western Electric Company

ROLLING PARTITIONS
Richards-Wilcox Mfg. Co.
Horn Folding Partition Co.
Park, Winton & True Co.
Wilson Corp., Jas. G.

ROOFING
Barrett Company, The

SANDERS
Clarke Company, A. A.
Hild Floor Machine Co.
Skilsaw, Inc.

SASH OPERATING DEVICES, STEEL
Detroit Steel Products Co.
Truscon Steel Company

SCIENTIFIC APPARATUS
Bausch & Lomb Optical Co.
Standard Electric Time Company
Welch Mfg. Co., W. M.

SCREENS—PICTURE
Eastman Teaching Films, Inc.

SEWAGE EJECTORS
Nash Engineering Co.

SEWING MACHINES
Singer Sewing Machine Co.

SHADE ADJUSTERS
Eveleth Mfg. Co.

SHOE LOCKERS (STEEL)
Durabilt Steel Locker Co.

SHOWERS
Clow & Sons, James B.
Crane Co.
Hoffmann & Billings Mfg. Co.
Speakman Company

SIGNS
Russell & Sons Co., Albert

SLATED CLOTH
Beckley-Cardy Company
N. Y. Silicate Book Slate Co.
Weber Costello Company

SOUND PICTURES
Electrical Research Products, Inc.

SOUND SYSTEMS
Electrical Research Products, Inc.
Multi-Selecto Phonograph, Inc.

SPRAY PAINTING EQUIPMENT
DeVilbiss Mfg. Co., The

STAFF LINERS
Weber Costello Company

STAGE CURTAINS, EQUIPMENT AND SCENERY
Electrical Equipment Co.
Tiffin Scenic Studios
Twin City Scenic Company
Universal Scenic Studios, Inc.
Volland Scenic Studios
Weiss & Sons, I.

STAINS
Johnson & Son, S. C.

STAIR TREADS
Alberene Stone Company
American Abrasive Metals Co.
Norton Company
Sanymetal Products Company

STATIONERY CABINETS (STEEL)
Durabilt Steel Locker Co.

STEEL CHAIRS
Angle Steel Stool Company

STEEL JOISTS
Truscon Steel Company

STEEL LOCKERS
Berger Manufacturing Co.
Durabilt Steel Locker Co.
Lyon Metal Products Co.
Narragansett Machine Co.
Northwestern Steel Products Co.

STEEL STORAGE CABINETS
Angle Steel Stool Company
Berger Mfg. Co.
Durabilt Steel Locker Co.
Lyon Metal Products, Inc.
Northwestern Steel Products Co.

STOOLS—STEEL ADJUSTABLE
Angle Steel Stool Company
Royal Metal Mfg. Company

STOKERS
Iron Fireman Mfg. Co.

TABLES
Kewaunee Mfg. Company
Kimball Company, W. W.
Mutschler Bros. Company
Remington-Rand Business Service, Inc.
Sheldon & Company, E. H.
Standard School Fixtures Co.
Welch Mfg. Co., W. M.

TABLETS—BRONZE
Russell & Sons Co., Albert

TEACHER AGENCIES
Natl. Association of Teacher Agencies
Teacher Agencies Directory

TEACHERS' CABINETS (STEEL)
Durabilt Steel Locker Co.

TECHNICAL PAINTS
Sonneborn Sons, L.

TELEPHONE SYSTEMS
Automatic Electric Company
Graybar Electric Co., Inc.
International Business Machines Corp.
Standard Electric Time Company

TEMPERATURE REGULATION
Johnson Service Company
Powers Regulator Company

TENNIS NETS
American Wire Fence Company

TOILET PAPER AND FIXTURES
A. P. W. Paper Company

TOILET PARTITIONS
Clow & Sons, James B.
Milwaukee Stamping Co.
Sanymetal Products Company

TOILET SEATS
Brunswick-Balke-Collender Co.

TOOL CABINETS
Sheldon & Company, E. H.

TOOL CABINETS (STEEL)
Durabilt Steel Locker Co.

TOWELS
A. P. W. Paper Company
Brown Company

TYPEWRITERS
Remington-Rand Business Service, Inc.

VACUUM CLEANING SYSTEMS
Spencer Turbine Company, The
Sturtevant Co., B. F.

VACUUM PUMPS
Nash Engineering Company

VALVES—FITTINGS
Clow & Sons, James B.
Crane Company
Sloan Valve Company

VARNISHES
American Crayon Co.
Hillyard Chemical Company
Huntington Laboratories
Vestal Chemical Company

VENTILATING SYSTEMS
American Air Filter Co.
Buckeye Blower Company
Nelson Corp., The Herman
Peerless Unit Vent. Co., Inc.
Sturtevant Company, B. F.

VENTILATORS
Sturtevant Company, B. F.

VISUAL INSTRUCTION EQUIPMENT
Bausch & Lomb Optical Co.
Keystone View Company

VOCATIONAL EQUIPMENT
Christiansen, C.
Columbia School Supply Co.
Kewaunee Mfg. Company
Kimball Company, W. W.
Richards-Wilcox Mfg. Co.
Sheldon & Company, E. H.
Welch Mfg. Company, W. M.

WARDROBES
Austral Window Co.
Circle A Products Corp.
Evans, W. L.
K-M Supply Company
Park, Winton & True Co.
Prose-Maco Mfg. Company
Richards-Wilcox Mfg. Company
Wilson Corp., Jas. G.

WARDROBE CABINETS—STEEL
Durabilt Steel Locker Co.

WASTE PAPER BASKETS
National Vulcanized Fibre Co.
Northwestern Steel Products Co.

WASTE RECEPTACLES
Solar-Sturges Mfg. Co.

WATER CLOSETS
Clow & Sons, James B.
Crane Co.
Vogel Co., Joseph A.

WATER COLORS
American Crayon Company
Binney & Smith Company
Talens School Products, Inc.

WATER PURIFIERS
Clow & Sons, Jas. B. (R. U. V.)
Wallace & Tiernan, Inc.

WATERPROOFING
Sonneborn Sons, L.
Truscon Steel Company

WEATHERSTRIPS
Athey Company, The

WINDOW FIXTURES
Austral Window Company
Peerless Unit Ventilation Co., Inc.
Williams Pivot Sash Company

WINDOW GUARDS
Badger Wire & Iron Works
Cyclone Fence Co.
Northwestern Steel Products Co.
Stewart Iron Works Co., The

WINDOWS—ADJUSTABLE
Austral Window Company
Detroit Steel Products Company
Kawneer Company, The
Northwestern Steel Products Co.
Truscon Steel Company
Universal Window Company
Williams Pivot Sash Company

WINDOWS—REVERSIBLE
Austral Window Company
Detroit Steel Products Company
Williams Pivot Sash Copmany

WINDOW SHADE CLOTHS
du Pont de Nemours & Co., E. I.
Hartshorn Company, Stewart

WINDOW SHADE ROLLERS
Hartshorn Company, Stewart

WINDOW SHADES
Athey Company, The
Beckley-Cardy Company
Draper Shade Co., Luther O.
du Pont de Nemours & Co., E. I.
Hartshorn Company, Stewart
Maxwell & Co., Inc., S. A.

WINDOWS—STEEL
Detroit Steel Products Company
North Western Steel Products Co.
Truscon Steel Company

WIRE GUARDS
Badger Wire & Iron Works
Cyclone Fence Company
Stewart Iron Works Co., The

ADVERTISERS' REFERENCE INDEX

After the Meeting

VENTILATION IS NOT DEODORIZATION

This story was told by the late Major E. R. Pierce, author of the widely used *Practical Manual of Steam, Vapor and Hot Water Heating*. He was one of the pioneers of radiator heating.

The incident happened in one of the first installations of mechanical ventilation in Ohio schools. Major Pierce sold the boiler and radiators to the successful heating contractor.

At the dedication of the school, the president of the school board invited the contractor to tell the assembled audience, something of the ventilating plant that had cost so much to install. The contractor dwelt enthusiastically upon the merits of mechanical ventilation as an odor remover. He stated that the volume of six complete air changes per hour, would completely sweep odors before it, driving them from the building as foul air.

These sweeping assertions annoyed a German competitor, already peeved by the award of the contract to another. So the German heated the firing scoop red-hot, loaded it with fresh horse manure, and then paraded the auditorium, shouting, "Now, you Dumkopf, take dot schmell oudt."

When the odor persisted in diluted form for several hours, the authorities concluded that they had been "gyped" in their purchase of a ventilating plant. Consequently they refused to pay the balance of the contract. The contractor brought suit to collect it. Major Pierce was summoned as a witness.

On the day of the trial, Major Pierce arrived in town after court had convened. Proceeding directly from the train to the courtroom, he was immediately placed on the stand as an expert witness. After the preliminaries, Major Pierce asked permission from the court, to relate in his own way, why ventilation could not be deodorization. Permission was granted, with the reservation that, if necessary, questions would be put to him, to clarify his statement.

Major Pierce began: "This is a farming community, and it is winter time. Sleigh riding is a common pastime. You all have had the experience of encountering a skunk, and you have surely observed, how, with all out-of-doors for ventilation, the skunk odor persists for hours; sometimes for days."

At this point, the crowd in the courtroom burst into a great uproar. When it was quieted, the judge decided the case for the contractor.

When Major Pierce could reach his friends, he inquired what he had said to make such an outburst. The reply was: "Don't you know? The board's attorney, with his girl, encountered a skunk last Sunday night. They had to burn their clothes."

Caught!

Teacher: "Why do you always add up wrongly?"
Scholar: "I don't know."
Teacher: "Does anyone help you?"
Scholar: "Yes, my father."
Teacher: "What is he?"
Scholar: "A waiter."

A Freshman's Grammar

Teacher: "Parse the word kiss."

Pupil: "This word is a noun, but it is usually used as a conjunction. It is never declined and more common than proper. It is not very singular, in that it is usually used in the plural. It agrees with me." — Pathfinder.

Just So.—"Why have words roots, pa?"

"To make the language grow, my child."—Baltimore American.

PERSONAL RECOLLECTIONS OF MR. HOLDEN

By Wm. Geo. Bruce

Miles Holden reminded me recently of my old-time contacts with G. W. Holden, of book-cover fame and the founder of the firm which still bears his name. I was pleased to be so reminded. Miles is the son of G. W. Holden.

Let me go back about 30 years and introduce you to G. W. Holden, who was then personally known to every educator in the land. He had conceived the idea that schoolbooks deserved protection, and that there were hygienic reasons why a book should be kept clean. Hence the famous Holden book covers.

But I am here concerned with the man rather than his product. Holden was an enterprising Yankee, small in stature, resourceful, energetic, and industrious. He wore dark side whiskers which readily distinguished him from every other man. He possessed fine conversational qualities and an affable manner.

The first time I met Holden was at an educational gathering held at Washington, D. C. He gave a dinner one night in honor of a dozen educators of fame. The guests included such men as Dr. William T. Harris, Albert G. Lane, F. Louis Soldan, Edwin P. Seaver, Warren Easton, William H. Maxwell, and others. I was somewhat elated to find myself one of a select list of guests. The incident is mentioned merely to demonstrate the fact that the elder Holden enjoyed the good will and friendship of the nation's best-known educators.

Going Up in a Balloon

At the St. Louis World's Fair, Holden and I chummed for one whole day. "Bruce, I want you to join me in going up in a balloon," he said in a spirit of hospitality. "It will be a novel experience for both of us."

"But, where is this balloon going?" I inquired apprehensively. The idea was a little too new for me. "Suppose we get lost in a southern forest, or the balloon splashes into the Mississippi River? What then?"

"Then I will be right with you," was his assuring reply. "Whither thou goest, I go!"

"All right we go," was my response.

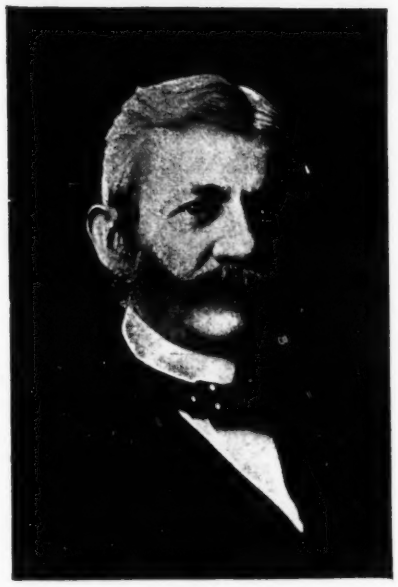
We now meandered to that part of the fair grounds where the balloon was customarily filled with hot air or natural gas, and where the ascensions were being staged.

Holden began to negotiate with the balloon man. But that individual informed us regretfully that the balloon had ascended in the morning and had not as yet returned. He didn't know whether the craft had decided to come back by night, or take a jump into Mexico.

At any rate, the Holden-Bruce balloon flight was off. Somehow we never got together again for a similar adventure.

Alaska and London

One hot summer's morning, Holden made his appearance in Milwaukee. I showed him the town and treated him to some cold lunches. He told me that he had come all the way from Springfield, Massachusetts, and was on his way to Alaska. I supposed that the Eskimos had heard of his book covers, and the school authorities of that corner of the world were appreciative of neatness in the care of schoolbooks.



GEO. W. HOLDEN

But that was not Holden's mission. He wanted to see the great North land, watch the gold hunters, and incidentally meet the Lapplanders and Eskimos on social grounds.

In the month of November of that year I found myself in London, after two months of European travel, on the home stretch to my own country. Walking along the Strand, one of the world's busiest thoroughfares, I heard a voice cry out:

"Hey there, Bruce, what in hell are you doing here?"

I looked about to see who mentioned my name. The greeting was so intensely American as to make the slight profanity assume a musical ring.

Lo and behold, it was Holden! He was accompanied by a Boston friend and business associate.

"Bless your old heart, Holden," I exclaimed with joy. "I imagined that you were still in Alaska spearing seals, or shooting polar bears. How did you manage to jump from Alaska to London?"

Well, a cozy visit at the Cecil Hotel explained all. Holden had traveled all the way from Alaska to Europe, where he and his associate had traversed that country from Spitzenbergen in the North where they saw the midnight sun, thence to the Italian Riviera in the South. They, too, were on the home stretch.

"We have done with Europe," said Holden. "You can take it now, and keep it. We are going home!"

Whenever I see the portrait of the late G. W. Holden in the book-cover advertisements, I am reminded of a former day and of my associations with one of the most delightful men in the school-supply field. I am always pleased to think that the useful industry which he founded continues to render a valuable service to the cause of popular education, and is being successfully managed by his son, Miles Holden.

She Had Her Way

A school was pursuing its placid course when a woman appeared in the hall carrying a hammer and calling loudly for Miss Primary. Miss Primary duly appeared, but at the sight of the hammer beat a hasty retreat to her room, where she secured the door.

The principal now came on the scene, and suggested that it might be better if they talked matters over in her private office.

"No fear," was the reply. "I've come here to use this hammer, and I'm going to use it. My Johnny's got the seat right out of his pants."

"But surely," urged the bewildered principal, "Miss Primary did not do that?"

"No," said the irate parent, "and I'm not blaming anybody, but I'm going to knock that nail down."

Modern Definition

Teacher: "Can you tell me what a waffle is, Junior?"

Junior: "Yes'm; it's a pancake with a nonskid tread." — Exchange.

He Enjoyed All But —

The lengthy recital had drawn to a close, ice cream and cake had been served, and the teacher was bidding the students good-by. One of the little performers had brought her small brother with her. As he was about to leave the teacher beamingly asked:

"Well, Bobby, did you enjoy the recital?"

"Yes," answered Bobby, "all but the music." — Exchange.

Modern Toxicology

Professor: "What is the most potent poison?"

Student: "An airplane; one drop and you're dead!"

Neighbor: "Where is that boy of yours? I haven't seen him around home for quite some time?"

Father: "He's now finishing his third year at Eastern University."

Neighbor: "Too bad! My brother's boy turned out the same way. He's now doing his fourth year at Leavenworth." — Exchange.

Buyers' News

ST. LOUIS STANDARDIZES THE TESTING OF SCHOOL SUPPLIES

The St. Louis board of education has decided to appoint a committee of principals and teachers whose duty it will be to test school supplies. The procedure of the committee follows:

Test Samples Independent of Price. Obtain the samples appertaining to the supplies assigned to the committee from the supply commissioner, making a record of each sample received.

Test each sample on its merits, keeping a record of the results of such test. Where the Board submits a sample to the bidders, either the cheapest bidder on the sample should receive the award, or all the bids should be rejected. No award should be made in such case except to the lowest bidder. If the lowest bid is not satisfactory, all bids should be rejected.

Select the best sample offered and designate also the second best.

Ascertain Prices of Samples Selected. After the best samples have been selected and the choice recorded in writing, obtain the price of the goods offered from the supply commissioner, and see whether the difference in price between the samples selected and other samples next in quality is sufficiently great to change the selection spoken of in the fourth paragraph in favor of any article which, while slightly inferior to the best offered, is serviceable and much cheaper in price.

Report of Committees. The chairman of each committee should write a report of each kind of article or group of supplies assigned to the committee, stating which is recommended as best and which is second best, considering both quality and price.

Record of Tests. Keep a record of all the tests made, and leave it, together with the preliminary report of selection regardless of price, mentioned in the sixth paragraph, with the assistant superintendents in charge.

Return Samples to Commissioner. Return all the samples, properly wrapped and labeled, to the supply commissioner, with the request to keep these samples until the Board has decided the award of supplies. No samples should be destroyed or distributed.

Caution Concerning Agents. The members of the various committees are requested not to talk to agents or outsiders about the recommendations which they are to make.

Report to Superintendent. The assistant superintendents in charge will kindly forward the result of the committees' investigations and tests to the superintendent on the day following the meetings of the committees.

Detaching Trade-Marks from Supplies. Before any sample is submitted to the committee, the supply commissioner should be requested to detach from the samples the trade-marks, names, and labels, which show the manufacturer or person offering any samples for competition, so that the opinions of the experts in the various committees shall clearly and exclusively be based on the merits of the articles, without any knowledge of who offers the sample in question. For this purpose each sample should be marked with a number.

NEW PRODUCTS FOR SCHOOL USE

New, Improved Speakman Shower Heads and Showers. The Speakman Company, Wilmington, Del., manufacturers of Speakman showers and fixtures, has just issued descriptive circulars telling about the new features and advantages of the Speakman shower heads for schools and other public buildings.

The Speakman any-stream, self-cleaning shower head which is used with every regular shower installation, is interchangeable with other heads. The plungers are operated by the lever handle, which allows the bather to adjust the force and volume by enlarging or reducing the size of the holes. It can be supplied in unfinished chromium finish, at a cost much lower than the regular finish.

The Speakman Company manufactures a line of fixed wall-type heads, unit-control and triple-cluster shower heads, and club shower heads, as well as a line of showers for regular and special installations, such as built-in mixometer, built-in two-valve shower, and mixometer and two-valve showers of the exposed type.

Complete information and prices may be obtained by any school official, or architect, upon request.

Offer New Service. The American Crayon Company, Sandusky, Ohio, in its interior-finish department, is offering a new floor-research department for the study of flooring problems. The firm has been doing extensive research work in the application of its new product, "Permatite," for the finishing of school floors.

"Permatite" is a penetrating floor varnish which, when properly applied, seals the floors against grease, oil, and dirt. It is not slippery like oil or other surface finishes, but makes a sure-footed and fast floor for gymnasiums, kindergartens, and similar rooms in schools.

The interior-finish department of the American Crayon Company is in charge of Mr. Wm. G. Youse, who was for many years connected with the crayon department of this firm.

The research floor service offered by the company involves a careful study of floor-finishing problems, with a definite service suggested in the use of "Permatite" for floor finishing.

K-V-P School Papers. The Kalamazoo Vegetable Parchment Company, of Kalamazoo county, Mich., has announced the completion of their line of standardized school papers, manufactured under the widely known K-V-P trade-mark.

These papers are manufactured in the world's "model paper mill" and under conditions which insure quality and uniformity of product. They represent the first successful attempt at standardizing school papers both from the standpoint of use and quality. This

THE K-V-P MARK OF STANDARD SCHOOL PAPERS

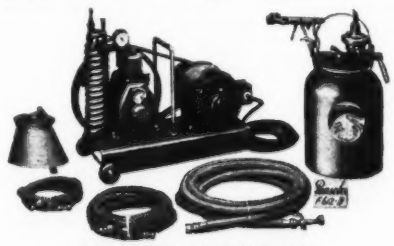
standardization has been established by extensive laboratory controls and by investigations of school requirements.

The K-V-P brands include the following: Glendale, Glendare, K-V-P Bond, Wayland, Career, Prosperity, Wolverine, The Guard, Red Bar, Del Rio, and Clearscript.

The K-V-P Company is prepared to send school authorities samples of each of their brands and to make definite suggestions concerning the selection of papers for school use.

New Paasche Portable Air-painting Outfit. The Paasche Airbrush Company, 1909 Diversey Parkway, Chicago, Ill., manufacturers of spray-painting equipment, has announced a new ½-h.p. portable air-painting outfit, with double-cylinder air compressor, a recent improvement over the Paasche line of spray-painting equipment.

The new device has a large volume of air pressure, is compact, sturdy, light in weight, and is sufficient for a great variety of air-painting and air-finishing



THE NEW PAASCHE AIR-PAINTING APPARATUS

jobs. It is equipped with the famous Paasche features as copper cooling coil, with water and oil separator, which provides clean, dry air without pulsation. It may be plugged into a 110- or 220-volt circuit.

Complete information and prices may be obtained by any school official upon request.

Sofi Oak Flooring Service for Schools. The Southern Oak Flooring Industries, Little Rock, Ark., through its research and advisory department, is offering opportunity for a study of flooring problems. The firm is performing an extensive research work in the application of its new product, Sofi oak flooring for school floors, and is prepared to furnish specifications and advice on all school-floor problems.

Sofi oak flooring is the trade name for a most durable type of wood flooring, which resists grinding wear, is adaptable to every school specification, is immediately available, and economical in cost. Sofi oak flooring, through mass production, affords school boards the correct type of oak flooring for every use, at prices within the reach of the most modest appropriation. It is available through companies affiliated with the oak-flooring industries. These include the Arkansas Oak Flooring Company, Pine Bluff, Ark.; Fordyce Lumber Co., Fordyce, Ark.; Nashville-Hardwood Flooring Co., Nashville, Tenn.; E. L. Bruce Co., Memphis, Tenn.; Kellogg Lumber Co., Monroe, La.; Perfection Oak Flooring Co., Shreveport, La.; Crossett Lumber Co., Crossett, Ark.; Long-Bell Lumber Sales Corp., Kansas City, Mo.; Southern Pine Lumber Co., Texarkana, Tex.; Dierks Lumber & Coal Co., Kansas City, Mo.; Memphis Hardwood Flooring Co., Memphis, Tenn.; Texas Oak Flooring Co., Dallas, Tex.

WITH THE SCHOOL MANUFACTURERS

Beckley-Cardy Company Suffers From Fire. The Beckley-Cardy Company, 17 East 23rd St., Chicago, Ill., during the early part of April suffered a destructive fire, which practically ruined its stock and manufacturing departments. The records in the office were saved, although they suffered from the effects of the water poured into the building.

The firm has replaced its stock of supplies in temporary locations and is in position to handle all orders received. The office was completely equipped and in operation 24 hours after the fire.

New Prose-Maco Factory Building. The Prose-Maco Mfg. Company, Kansas City, Mo., manufacturers of the Prose-Maco classroom wardrobes and blackboards, has occupied its new home at 1520 Holmes St., Kansas City.

The building is a two-story factory structure, of brick construction, with special attention to lighting, ventilation, and sanitation. In the shops, the material and equipment are arranged for facilitating the handling of the work. The office is well arranged, light, and is provided with all modern conveniences for conducting the business of the firm.

THE NEW PROSE-MACO FACTORY

The new factory doubles the output of the firm and has been found absolutely necessary in order to meet the growing demand for Prose-Maco wardrobes.

USEFUL CATALOGS

Dunham Issues Book on Heating Standards. The C. A. Dunham Company, of Chicago, Ill., has just issued a booklet entitled *Modern Heating Standards,* which describes the differential vacuum heating system and the means of maintaining constant and mild room temperatures with definite economy.

The book is of a convenient pocket size, is well and attractively bound, and will be of interest to architects and school officials.

Kewanee Service in Schools. The Kewanee Boiler Corporation, of Kewanee, Ill., manufacturers of Kewanee steel boilers, has just issued an impressive 128-page book, describing and illustrating Kewanee service to schools. It is a geographic grouping of pictures and descriptive matter telling the story of the service performed by the Kewanee boilers in heating the schools in every state of the nation.

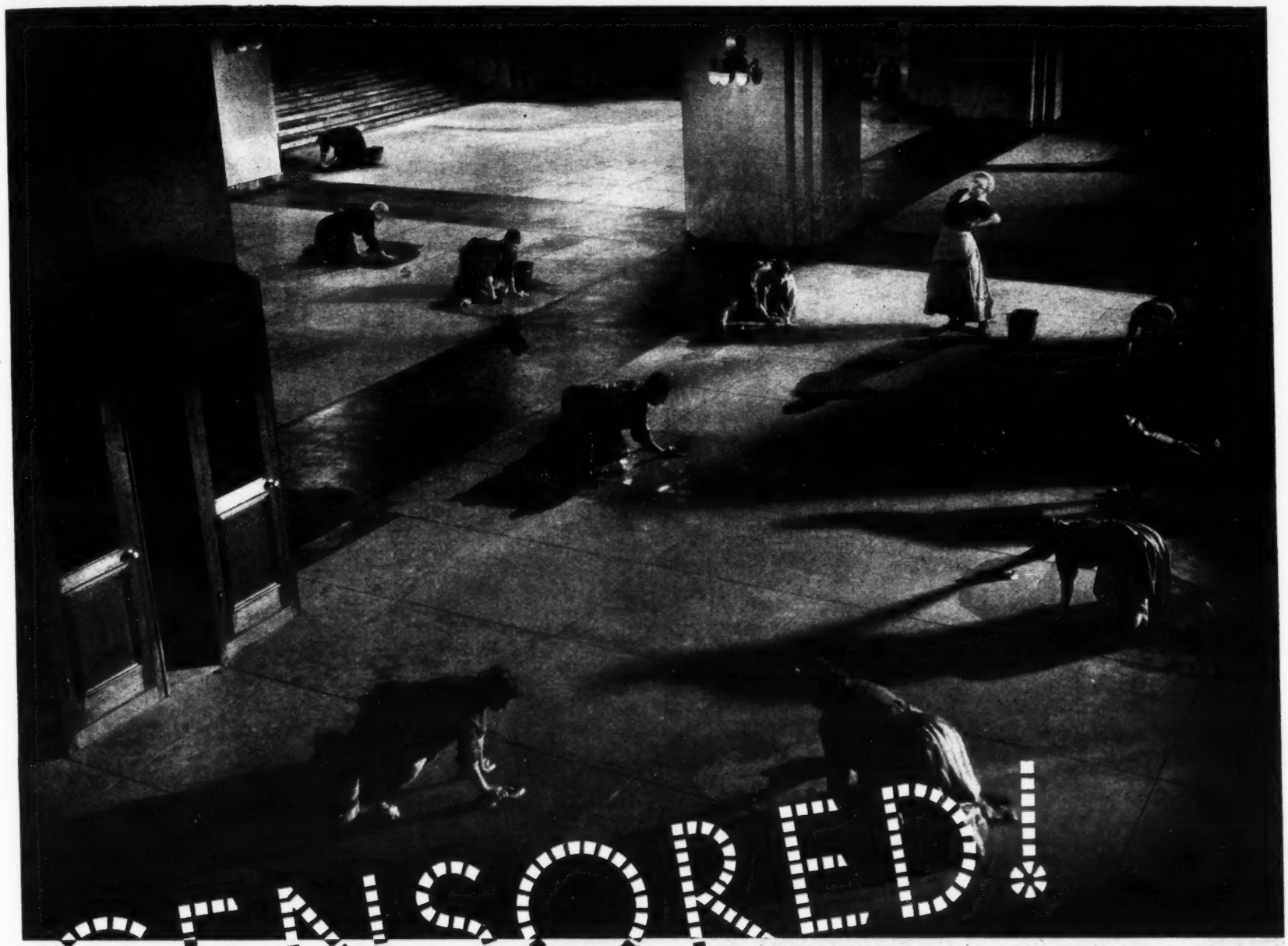
The Kewanee Company is fortified with threescore years' experience in the construction of steel boilers, and it maintains a very complete line of dependable heating boilers, water heaters, radiators, and tanks for schools and other public buildings.

Complete information may be obtained by any school official, or architect, upon request.

Catalog of EverWear Playground Apparatus. The EverWear Mfg. Company, Springfield, Ohio, manufacturers of playground apparatus, has issued its new Catalog No. 23, describing and illustrating its line of playground apparatus. The EverWear Company enjoys a reputation for the highest in quality, and safety, and its products are noted for their safety, durability, and playability. The catalog lists the 225 items of play apparatus exclusively EverWear in their design and manufacture.

The EverWear playground apparatus stresses the extra heavy, one-piece, malleable iron, rustproofed frame fittings. It aims at safely and permanently caring for maximum loads and stresses, so that the apparatus will withstand the maximum load and that the margin of safety may be beyond any possible maximum.

Complete information and prices may be obtained by any school official, or playground director, upon request.



CENSORED!*

One of the unusual photographic effects in the all-talking screen version of Fannie Hurst's popular novel, "Lummox."
Courtesy of United Artists.

All night long the soggy swish of scrub brushes, the rancid odor of water-flooded floors—everywhere pools of oozing dampness.

● Troops of weary women have been taking part in such midnight performances night after night—year after year. Countless buildings—offices, banks, institutions—have furnished the setting. With pathetic realism the performers have played their parts, as best they could, in the ineffectual battle with dirt and grime.

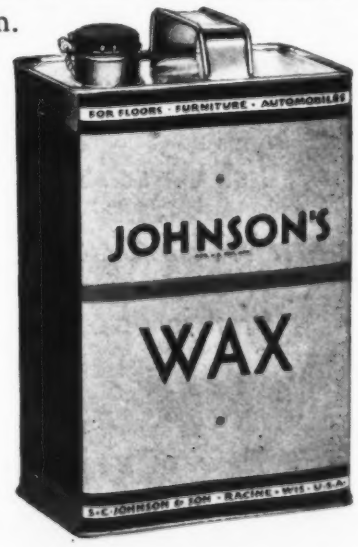
Then in stepped the censor. "This primitive business can't go on. It's unsanitary—inefficient—costly! Away with scrub brushes and pails!"

And so was ushered in the new method of floor maintenance now used in thousands of modern buildings. A modern, efficient, economical way of preserving and beautifying floors with Johnson's wax. Wood, linoleum, composition, tile, cork, in fact every kind of floor.

Today one person does the work of six scrubwomen and does it better, more thoroughly. Waxed floors never have to be scrubbed. They are *sealed* against dirt. Johnson's wax forms a hard, transparent film which protects floors from wear and disfigurement. Dirt can't penetrate this invisible armor. Only an occasional waxing is necessary. The maintenance cost is much less than with the old methods.

One building in Niagara Falls, N. Y., for instance, saved $6240.00 a year when they introduced this modern maintenance system.

● *For more facts send this coupon. It obligates you in no way.*



S. C. Johnson & Son, Dept. 515, Racine, Wis. Please send without cost or obligation full information on the modern method of floor care in stores, shops, offices and public buildings.

*Mark for the personal attention of*_____

*Name of School*_____ *Address*_____

THE FINNELLS NOW IN USE

Scrub and Polish Each Year

a floor surface equal to

ALMOST HALF THE U. S.

1906 - 1931

Finnell System, Inc. — designer and builder of the first machine to scrub or polish floors, ever since foremost in this field — this year celebrates its

25th ANNIVERSARY

In 1906, just an idea: today, thousands of Finnell users. Twenty-five years ago, a single machine; today, a volume of business that evidences world-wide acceptance and recognition by business and industry.

Estimating the average business or institutional floor to be scrubbed or polished twice a week, the *Finnells* now in use would, in the course of a year, cover a total floor surface equal to the area of this country east of the Mississippi.

Finnell has become more than simply the name of a machine. It is a *system* of floor maintenance. There are now nine Finnell scrubber-polishers—some small, others large enough to clean a path 24 inches wide. Still another *Finnell* is a combination that scrubs and absorbs the water *in one operation*.

For polished floors, the most recent *Finnell* development is *Finnell-Kote*, a semi-solid wax which is melted electrically by a dispenser attached to the machine, and thence is applied to the floor to be distributed and polished by the brushes *in one operation*.

Put your floor maintenance problem up to the *Finnell* organization, a nation wide staff of specialists, backed by twenty-five years' experience. *Finnell* service aims not to sell you merely a machine, but to provide the right machine or combination of machines that will maintain your floors in the best condition at the lowest cost. Address inquiries to FINNELL SYSTEM, INC., 805 East Street, Elkhart, Indiana.

FINNELL

Est. 1906

It Scrubs
Waxes
Polishes
Finishes

ELECTRIC FLOOR MACHINE

STANDARD SCHOOL EQUIPMENT

Views of AUSTRAL MULTI-UNIT Steel Wardrobe Opened and Closed as Installed in the Clinton Avenue and Union Avenue Schools, Irvington, N. J., Schneider, Kleeman and Werther, Architects.

THE architects' acceptance of the Modern AUSTRAL MULTI-UNIT STEEL WARDROBE has already resulted in its use in many of our latest and finest schools. . . . Most gratifying to the Austral Engineers whose experience in perfecting the AUSTRAL WINDOW has proven of greatest value in developing this new product. . . . The AUSTRAL STEEL WARDROBE is BUILT FOR PERMANENCE and is as lasting as the building itself. It is constructed of heavy gauged steel and is assembled on the job as a unit . . . rigid, noiseless, indestructible . . . and the steel adds nothing to the cost over wood construction. . . . Literature sent on request.

101 PARK AVE AUSTRAL WINDOW CO. NEW YORK CITY